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PC SHOW **NEWS**

- 486 trio launched
- Outrun 2 soon
- First PC genlock
- Mac emulation breakthrough
- ST console news
- Psion laptop - hands on test
- PC Show row breaks - games event looms
- Amiga education deal
- CPC death denied
- DrawPerfect arrives
- Coin-op explosion

Full details inside

ATARI'S 286 SURPRISE

**£599 power machine
means business**

page 3

ALSO INSIDE

ST, PC, Amiga, PCW,
CPC, Spectrum,
C64, Atari 8-bit, QL,
BBC, MSX - expert
hints, tips and news
for your machine

PLUS:
French videophones

GREEN COMPUTING



Do your bit for the environment
page 12

DROP THE BOMB - IT'S

ARTY TIME

**Beginners' guide to
computer art** page 14

SHOPPING EXPRESS

32 PAGES OF
BARGAINS

THIS WEEK'S BUYERS' GUIDE TO THE BEST DTP, GRAPHICS AND DIGITISERS

CONTENTS

FEATURES

GO GREEN 12

Leap on Margaret Thatcher's bandwagon with these hints for ecological computing

MINITEL 16

The remarkable French telecommunications system

PLANPERFECT 49

A look at a top-level spreadsheet program from the WordPerfect Corp

ART & COMPUTERS 75

A beginner's guide to art and graphics on computer

BUYER'S GUIDE 19

Desktop publishing, graphics software and digitisers reviewed

PC SHOW REPORT 4

All the news from the year's biggest show

REGULARS

LETTERS 12

SHOPPING EXPRESS 17

Pick up some great bargains here

JOBS 44

The best in computer vacancies

TECH TIPS 50

READERS' CLASSIFIEDS 30

Pages of readers' ads start here

GAMEPLAY 59

A weekly round up of what's new on the games scene, plus reviews, your views in Playback and the hard-hitting Street Talk

VOUCHERS 17

Buy Express for 58p and save £10!

BACK PAGE 78

YOUR MACHINE

Amiga	52
ST	52
PC	54
CPC	55
Spectrum	55
Commodore 64	56
PCW	57
QL	56
BBC, MSX	56
Atari 8-bit	57



Legal row engulfs 1990 PC Show

The future of the PC Show was cast in doubt last week as a bitter row broke out between its two organisers VNU and Montbuild.

And with the year's most important computing event in doubt two new shows have been announced which could end the tradition of having business and leisure computing exhibited under one roof.

Last July show organiser Montbuild broke free of the PC Show in order to plan a business show of its own for next autumn. It says VNU - a computer magazine publisher - did not complain.

However, VNU has slapped a sensational five million pound lawsuit on Montbuild alleging

breach of contract. VNU says Montbuild's attempts to put together an autumn show of its own have been done to displace the PC Show. The Montbuild event is pencilled in for next autumn at Earls Court - the venue for the PC Show.

To make matters worse for VNU another magazine publisher has announced a brand new show for next autumn in Earls Court. EMAP - responsible for such publications as ACE, The One, Commodore User and Sinclair User - will stage the European Computer Entertainment Show from 13th to 16th September next year.

That will be solely dedicated to

games and leisure sector. EMAP points out that the event will be staged by a company dedicated to the games market and that it will be put together by EMAP Exhibitions. That branch of the EMAP empire already organises some 50 shows around the country (most of which are not computer related).

Both the business and leisure industries are being given the choice of the tried and tested PC Show or two new events dedicated to their sectors of the market.

"The circumstances which have forced us to take legal action are outrageous," said VNU's boss Graeme Andrews. "The industry

and the public could be deprived of London's premier computer show as a result of the actions of Montbuild which is seeking in effect to secure the benefits of computer shows for itself."

Montbuild has responded in the writ by saying it has always "acted honourably and legally". It intends to defend its case.

An EMAP spokesman told Express that the firm is confident gamers and the leisure trade will take to the show and claimed some leading software houses had already pledged support.

Where this leaves those companies publishing business and leisure products is not clear.

CPC'S DEATH IS 'NONSENSE'

Amstrad has hit back at trade rumours that it is to scrap its popular CPC computers.

The firm was responding to a report in the trade press claiming that a decision had been made to pull the plug on one of Europe's most popular home computers. But Amstrad director Malcolm Miller last week told Express: "We're continuing to manufacture the CPC. That's all there is to it."

A senior Amstrad spokesman also commented: "These rumours are absolute nonsense which have been started because Dixons are selling off display stock."

Nevertheless, Dixons does not appear to be overly keen on the five year old micro. Most stores around the country are not taking it and its future in the



• Amstrad CPC: rumours denied

important High Street chain is uncertain.

Amstrad watchers are pointing out that the CPC 6128 and 464 are still big sellers in Western Europe especially France and Spain. Most found talk of the CPC's imminent death illogical.

AMOS DELAYED UNTIL NEW YEAR

AMOS - Mandarin's Amiga version of the STOS games creator - has been delayed until the beginning of next year.

The developers say the problem centres around the complexities of the Amiga's operating system. Also, Mandarin hopes to include various features requested by Amiga

owners who have seen the ST version.

That program included sprite editor, sound designer and music sequencer allowing games players with a rudimentary understanding of the BASIC language to create games. It reached number one on the Gallup charts.



• Outrun: Follow up to race out

Turbo Outrun on the grid

US Gold's presentation at this year's PC Show confirmed its hopes to lead the Christmas games rush with the follow-up to the successful Outrun.

Due for release this autumn is Turbo Outrun, the licensed conversion of Sega's sequel to the hydraulic wonder that wowed arcade players back in 1987. The original has been enhanced with such refinements as varying weather conditions and car handling. The conversion replaces the planned - and much advertised - Outrun Europa, which was under development before the release of the coin-op. That has been scrapped in favour of the conversion.

"There were few similarities between the two games and also a few differences," Express was told, "It just wasn't worth carrying on with a game that was similar to another game we were due to release anyway. We feel it was a better idea to start programming from scratch, as it would have caused too much trouble putting the changes in to turn Europa into Turbo Outrun."

US Gold is obviously confident in the game, as its stand at the PC Show was adorned with Turbo Outrun logos and a shiny new Ferrari Testarossa.

ATARI SHOCKS WITH BARGAIN 286 PC

Atari last week shocked the computing world with the launch of a 286 PC weighing in at a price busting £599.

The firm wants to attract a new breed of computer user hoping to skip the aging 8086 PCs for faster 286 machines. Prices for such PCs have been tumbling all year although this is the first to really challenge Amstrad at the bottom end of the spectrum.

The Atari ABC 286 has 1Mb of memory with a single 3.5 inch disk drive. It has three expansion slots. The machine costs a further £100 for anyone who wants an EGA monitor. A 30Mb hard disk version with monitor costs £899.

Many were taken aback by the comparatively low level launch. Atari often leaks details of forthcoming products to the press in an attempt to gauge reaction. Neither the press nor the public knew anything about the ABC until they saw it in the corner of Atari's massive PC Show stand at Earls Court last week.

Atari seemed to enjoy the shock value and says it won't be talking about forthcoming products until they arrive. Even so, such a low cost 286 option is such a good bargain that Atari hardly needed to gauge anyone's reaction before launch.

Atari's UK boss Bob Gleadow told Express: "We've come in for a lot of criticism for talking about products before they arrive. We're learning from the Portfolio experience. We previewed that and people started asking where this lead was or that add on. It scared us."

"We're going for the consumer market - and that's where Amstrad has a huge portion. Anyone who wants a piece of it has to go after Amstrad." He added: "This is a solid low cost machine."

• Apart from the ABC, British computer users got a first look at the Stacy laptop



• As easy as ABC: Atari's surprise 286 was launched at the show

at the weekend. As stated last week the 20Mb machine is available this week priced at £1,299. The £799 entry level model will arrive early next year.

Elsewhere on the Atari front the ST console has reared its head again. The machine would have been established here already but for the arrival of the Lynx handheld console. Gleadow broke his non

disclosure rule to estimate that that £120 machine will be here by the middle of next year. "We've managed to get out the Portfolio, Stacy, Lynx, TT, STE and the low cost 286 machine this year. Something had to give," he said.

"By this time next year I'll have the ST console sewn up in Dixons," Gleadow claimed.

Germans snub coin-op craze

German games publisher Rainbow Arts has slammed the popular film and arcade game licencing system.

The young company says games houses here are cashing in on cheap marketing plays by releasing games based on other media formats. "We don't want any movie tie ins or comic characters," said boss Mark Ullrich. "We're going to concentrate on games designed for home computers - original games."

"There are so many arcade licences with bad graphics. You can do a good quality arcade game on an arcade machine but you're not going to get that on a Spectrum. If you do a game designed specifically for that computer it

will be much better," Ulrich added.

He also said the firm would not be porting conversions across the ST and Amiga formats. Titles to expect on various formats this year include *Mystery of the Mummy*, *Oxxonian*, *Rock 'n' Roll* and *East v West*.

Meanwhile, two games compilations on compact disk format are expected to be launched by Rainbow Arts early next year for the ST and Amiga.

The CDs will have 10 games on each of them and will come with a gadget designed to link your computer to a normal CD player. The CD - First Edition compilation is already available for the C64.

LocoScript aids PC switch

Locomotive Software - the most prolific publisher in the Amstrad PCW world - is predicting an exodus of users to the IBM compatible PC.

The firm which previewed the PC version of best-selling word processor LocoScript last week says it's inevitable that the PCW faithful will be wooed on to more powerful PC compatibles. However,

boss Howard Fisher claimed that they will never abandon his trusted word processor.

"There are a lot of people who own PCWs and have for a long time been looking at the PC. But they hate what they see in terms of word processing. People want ease of use and that's what LocoScript offers," he said.

"We've done our best to

make the PC version the same as the PCW. The main point is ease of use." He even went on to claim that users of established PC word processing packages would abandon them in favour of the new LocoScript.

PCW owners are offered the package for £99 while others will pay £125. More on 0306 740606.



• Class of the '90s: aimed at parents and teachers

Commodore offers schools Amiga deal

Commodore has launched yet another bundle for its Amiga - this time with the slant on education.

The Class of '90s pack costs £499 and is being aimed at primary and secondary schools. However, Commodore thinks the deal is so attractive that it may be offered to parents this Christmas.

The A500 is to come with a MIDI interface, *Deluxe Paint II*, *Superbase Personal*, *Publisher's Choice*, *Maxiplan 500*, *Dr. T's Midi Recording Studio*, *Amiga Logo*, and the BBC emulator with some Beeb programs as well as goodies such as blank disks, a mouse mat, a free magazine and a diskette wallet.

Also thrown in will be *The Education File* - a 100 page guide to the Amiga as an aid to education.

"The pack was put together for primary and secondary schools but the response from everyone is so encouraging that we are seriously considering selling the product through normal retail chains. There must be lots of parents who aren't so keen to buy a computer unless there is an obvious educational advantage."

Commodore also hopes schools will take advantage of the deal which it says can bring youngsters with learning difficulties on a par with other students.

'Virus hype is outrageous'

Prominent user group The Computer Users Forum has warned of the forthcoming media circus which will be centred on the Datacrime virus.

That will strike on October 12th creating havoc on computers around the country. But it is widely expected that the numbers of systems affected will be small.

CUF says the media attention given to these events will spawn a rash of gimmicks and so called virus protection programs. "The quacks panic millions of computer users," said chairman Shahid Parvez. "They create and revive huge, non-stop demand for some ready made costly and lousy virus gimmicks. Their fancy tales and bogus hype inspire more twisted criminals to write harmful viruses. It's outrageous."

CUF is self financed organisation with about 4,000 members.

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SHOW OF STRENGTH

It finally happened. After all the leaks, speculation, planning and previewing the computer industry's annual miracle is over. The thousands of users, programmers, industry bosses, liggers, journos, importers, exporters and the plain curious poured into that sprawling, noisy, indoor city which is the PC Show.

And what a performance it was. OK, there was no big launch from Amstrad but Atari almost made up for it with the ABC PC. And Commodore had some tasty deals on offer which will entice another generation of Amiga fanatics.

The business hall was alive with delightful contraptions from the Far East and some home grown marvels to boot. The games hall buzzed and beeped with a small army of coin op machines and the latest in state of the art computer entertainment. The bit in the middle housed the daunting forces of Amstrad, Commodore, Atari and Acorn.

It had everything a computer lover could ask for. Read on for the definitive, no nonsense report on computing's greatest show...

- Amstrad's gaudy stand looked like a poor attempt to recreate Gerry Anderson's world of supermarionation. At the centre of this creation were the firm's newish PCs with lesser creatures (the Speccy, PC200 and CPC ranges) left a little unkindly on the outskirts. Without any real launches Amstrad's presence lost some of its usual charm - but not many people missed a quick visit.

- Bullish Atari sprawled its tentacles across acres of floor space and hired out little booths to its friends. Owners of Atari kit were well supplied with people to chat to, things to fiddle with and just a touch of show business razzmatazz. Sam Tramiel was on hand along with Timmy Mallett.

One would expect interest in the Portfolio to be waning a little following months of blanket coverage. But the tiny thing was like a glowing light bulb to fluttering moths.

Their new 286 was worth a look as was the Lynx handheld. Atari made the most of its ability to attract interest in almost anything it does.

- Great rival Commodore lacked the bright lights and TV personalities but the Amiga made up for it. They were everywhere running the best in graphics, music, DTP and games as well as a bit of interactive video.

It launched the *Batman* pack for the Amiga as well as the education bundle. And the good old C64 wasn't ignored either with the *Light Fantastic* offer on show.

- Commodore, already in the business market with its range of cheap, but fully-featured PC compatibles is planning to address the power user with its own 486-based machines. Commodore Marketing Manager Jeff Earl said 'We're planning to launch a range of high level professional PCs up to 386 and beyond'. When pressed about the possibility of a 486 machine Earl replied 'We could hardly describe ourselves as a major manufacturer of quality personal computers if we weren't considering launching a 486 computer'.

- It may well be Locomotive's greatest hour. *Locoscript PC* was very impressive and five minutes with proud boss Howard Fisher may have left you convinced that it's the greatest piece of software on God's earth. Indeed, it

PC Show report filed by Rob Ainsley, Jerry Glenwright, Andy Storer, Colin Campbell and Maff Evans...

looks good and PCW owning purists were, on the whole, satisfied.

- Ambitious Konix looked foolish on the first day. Lots of people inquisitively threaded their way toward the stand to find the much vaunted entertainment system missing. It arrived the next day and proved a hit with the younger showgoers.

- Brown Bag Software, the PC shareware outfit, were demonstrating their *PC Hookup v2*. The package transfers data from one PC (e.g. a laptop) to another via a parallel or serial cable. Also at the show and attracting interest was *MindRead*, an artificial intelligence word processor which can guess what you're about to write and do it for you. It's been around for several months but is just starting to gain recognition.

- Vine Micros' PC TV adapter was on show proving that it is possible to run a word processor on a TV, even in 80 columns - all for under £50. But causing most interest was the PC genlock. The add-on for EGA cards impressed everyone with its ability to superimpose titling on video graphics. The price should be about £120 when it is released.

- Spectre*, the extraordinary Mac emulator for the Atari ST, was being seen by most people for the first time. It was running Mac software, ported across via cable, at 20% faster than a Mac Plus! *MacPaint*, *HyperCard*, *Pagemaker* all run without problems.

The new *Spectre GCR* was performing the even more impossible: reading, writing and formatting Mac floppies, and running Mac software directly, all in a standard ST drive. Not cheap at £289 for the 128 version and £379 for the GCR version (including Mac ROMs - take off £120 for the ROMless versions) but a lot cheaper than buying a Mac, which starts at £1000...

- Fleet Street Publisher*, Mirrorsoft's DTP package, was being shown in its new version 3, showing off features like auto kerning, multipage documents, text wrapping round any shape graphic, UltraScript support, search and replace...

- Fancy your own weather satellite systems? *Timestep* were showing off theirs, available for your ST, Amiga, PC, Archie or Apple GS II for under £600...



Philips, which has signalled its intention to move heavily into the PC market, had a large stand with a large range of PCs, monitors (including the flat-screen LCD mono monitor) and printers (dot matrix and laser printers). No surprises, but a solid showing - Philips is clearly serious about its assault on the marketplace. Prices from £799 for a single floppy, 20Mb hard disk mono monitor XT system show why. Its new 386SX machine was demonstrated with the introduction planned later this year.

- There were several new releases and announcements from Korean outfit Samsung. A range of flat screen monitors are on the way, including a colour 14" VGA, and a colour multi-sync model, both featuring 0.31mm resolution. Mono models are coming too. Available now is Samsung's 386AE File Server for Novell NetWare 386. The company launched its new AT and demonstrated its S5200 laptop.

- Supervisions' 2D and 3D Desktop CAD package was on show in its new programmable 3000 top-of-the-range incarnation. It features extrusions, calculator, colour shading, connectivity, dynamic rotation, 13 decimal accuracy, multi interactive viewports and symbol libraries.



- Viglen was pleased to show off its all-British 386 PC, clocked at 33MHz, for under £3,200. The Vig III/33 has a Landmark speed of 55MHz, and Power meter MIPS rating of 7.58. A 60Mb hard disk is standard and includes 4Mb of RAM. Viglen's lower price PCs were also there, from the Vig I - an XT running at 12 MHz.

- Walters was showing off its new 32-bit 386 PCs. An impressive machine - ripping through standard software at 20MHz! - available in various options from no hard disk up to 80Mb.

- Supply Technology launched several products claimed to be UK firsts. There were tape streamers, low cost data cartridges, Super EGA Hi Res adapter cards, a Mitsubishi hand scanner, OCR(optical character reader) software and an enhancer that improves the grey scaling of hand held scanners. The OCR reader coped with a 99.5% accuracy with skews of up to 10 degrees (skewed scanning is the bane of OCRs) and virtually any font in 6 to 20 point size even with kerning. A retail price of \$295 points to a possible £199 in the UK.

- HyperChart* - presentation software for the ST - was on show with an impressive range of 3D rotated perspective charts. This should boost the ST's pretensions to being a 'serious' machine - when it comes out for the 520/1040. No release date or price is known yet.

- Roland's Computer Music Sound modules were on show and drew a lot of approval from the musos there. Digital Faders, Music Entry Pad, Intelligent Arrangers, and MIDI sound modules were on display. For PC owners there are now sound cards and MIDI interfaces from Roland too.

■ The Archie's capacity as an Amiga-beating graphics machine was shown by ArVis's range of video and graphics expansion cards. Digitisers in real time, 384K framestore, colour genlock and image editing software made for an impressive display – live video combined with computer graphics!



• Another program for the Archie was ■ RISC OS version of *Euclid*, the 3D modelling and animation system – multitasking, multidocument, and interactive. Ace Computing's package was on sale for £70.

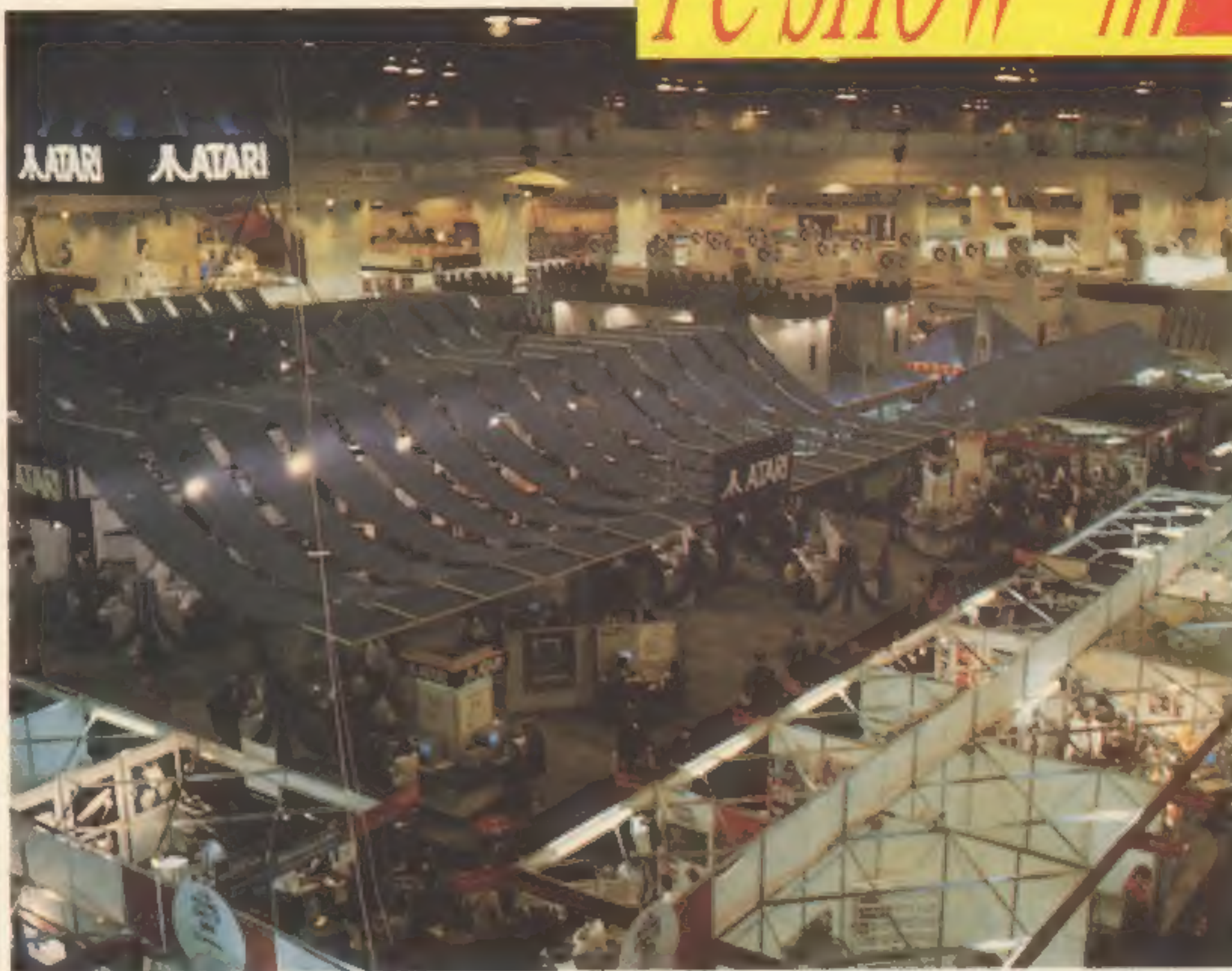
■ Also in the 'Acorn Castle' were CJE Micros' RAM upgrades for the Archimedes 300 and BBC A3000; Pure Linguinity's SCSI interface card; EMR's Studio 24 Plus, a MIDI mixing package; Impression, a compact, fast and powerful DTP program written entirely in ARM assembler, from PCS; Scan-Light, an A4 scanner, and *Filer Plus*, also from PCS; Clares' *Interdictor*, the first flight sim for the Archie, which was really impressive; *Artisan 2*, also from Clares; *Armadeus*, the sampler; business software from Mitre including *Flying Start* (database), *DiscTree* (hard disc manager) *TimeWatch* (personal organiser) and *C-Front* (C development environment); and *PipeDream*, the old Z88 software now on RISC OS from Colton. There was another scanner from Watford, the Archi Hand Scanner, and several new products from Minerva including *Atelier*, *Ancestry* and *Multi-Store*, all record handling programs. They even had *Casino*, a multi-tasking Blackjack/ Fruit Machine etc. game!

■ *Music X*, the £200 Amiga music package, was seen by a lot of people for the first time, after its debut recently at the British Music Fair. Boasting features such as graphic waveform edit, track control, patch edit, a powerful sequencer, sampler, MIDI filtering and key mapping, the reality lived up to the expectations from those reviews in the press.

■ Addonics' MBVA-386A-33 Cache Motherboard looks as impressive as its name. Intel 32 bit CPU, 33/8MHz, 0/1 wait state, 80387 math co-processor, C&T AT/386 chipset, 32K cache memory on board, 256K ROM...

■ *Virtuoso*, launched at the show, proved that the ST still has to be a contender for the serious musician. The screen shows a piano keyboard and writing music is really intuitive – just the same as playing a real keyboard. Written entirely in assembler, the program boasts an impressive spec: 32 tracks, 120 clocks per quarter note, on line HELP, realtime MIDI volume and pan, looping, quantise strength, multi-tasking – a very powerful package for a very powerful machine.

■ *Replay Professional*, a new sampler for the ST, was on show at Microdeal's stand. Included is a Sample editor, a sample sequencer and a MIDI synthesiser, all for £129. Audio Visual Research announced its A16S Samplerack for the ST, claimed to be the first 16 bit stereo rack for under £600. Sample frequency up to 44kHz – CD quality – dual on screen real time oscilloscope, on screen sample editing, digital sample filtering, 128 point 3D Fast Fourier Transforms plus a range of real



TIP-TOE THROUGH THE TULIPS

Making its first major push into the power PC arena is Intel's 486 CPU with several manufacturers offering computers built around the powerful processor. Up-market computer company Tulip proudly displayed the TR486, a floorstanding model offering a MIPS rating of 10.86 returning under the Landmark speed test an equivalent of 117MHz! The company also exhibited its new range of PCs – the standard 8088 based PC Compact 2, a 286 range including the LT laptop, and their top-of-the-range SX 386s. Prices given ranged from £795 for the twin-floppy mono monitor Compact through £2895 for the CGA 40Mb hard drive LT to £9040 for a colour VGA 660Mb TR 386/25 system.



PSION'S MOBILE COMPUTER

Seeking to escape its 'electronic Filofax' image, Psion is launching a range of lap-top PCs. Two inches thick and the size of this magazine, the machine drew much attention from the assembled with its sleek lines and quality of construction.

Psion has adopted the popular clam-shell case with the lid opening to reveal the screen, full size QWERTY keyboard and several special function keys. Realising the importance of the mouse in today's software, Psion has developed a touch sensitive pad which, with the aid of a forefinger, can be used to point, drag and click various on-screen cursors, open windows and use WIMP-environment software to the full.

Rather than incorporate heavy floppy drives into the new lap top, the Mobile



Computer (as the range is known) relies on Flash EPROM solid state disks (SSDs) which can store 500K – soon to be 2Mb – with minimal power requirements.

One intriguing feature is the voice module which can store, process and replay 8 minutes of speech. Built-in text processing and organiser software is provided. Add-ons include a voice processor, quad modem, bar code reader,

fax and pager. Three models make up the range, all with two expansion ports, serial/parallel interfaces and MS-DOS on ROM. 'Leading proprietary programs' are promised on SSDs.

TECH SPEC.

Intel 80C86 CMOS central processor running at 7.68Mhz
768K RAM (top of range model)

Supertwist LCD CGA compatible monochrome screen
Full-sized QWERTY keyboard
Touch pad
RS232
Disk drive and extension speaker ports
MS-DOS 3.2
Size: 49mm x 314 x 227mm
Weight: 1.9Kg (4.3lb)
Bundled software

time and steptime effects like flanging, reverb, echo etc. Price £595, available by November.

▪ A new range of professional quality modems was launched by communications specialists Amber Logic. The new modems known as the Mistral range feature easy expandability to allow upgrade to V32 and V29 FAX operation.



▪ If you've ever listened to computer generated music over a telephone line while waiting to talk to someone, then the DLL stand you'd have felt instantly at home. DLL demonstrated at ear-shattering volume its recently released GameBlaster board to PC owners coveting sound generation greater than a beep. A wild-eyed, gyrating operator tapped frantically at the keys of a forlorn PC compatible in attempt to produce recognisable sounds.

▪ Elite Systems announced the official launch of Motivetime, a new development team for 'front line' entertainment software on CD ROM, CDI and ROM cartridge based systems. On show at the stand was the familiar Paperboy in an unfamiliar guise on the ST, Amiga and PC. It's out on October 2nd.

▪ Dynamics was showing its new joysticks. The Competition Pro Glo Joysticks are in various shades of bright fluorescent colours, so you should be OK if you get shipwrecked while playing a game.

▪ Activision announced three new arcade licence signings for releases during 1990: *Dragon's Breed* (from the same team that wrote *R-Type*) *Ninja Spirit* and *Atomic Robokid*. The company also previewed some of its forthcoming titles in the Christmas run-up - *Tongue of the FatMan*, *Face Off*, *Mines of Titan*, *Cosmic Osmo*, *PowerDrift* on the Sega, *Fighting Soccer*, *Super Wonderboy*, *Dynamite Dux*, *Altered Beast*, *Galaxy Force*, and *Fighter Bomber*.

▪ Rainbow Arts previewed *Oil Imperium* (DIY Dallas) *Volleyball Simulator*, *Mystery of the Mummy*, *Days of the Pharaoh* (Egyptian exploration and adventure) *Oxxonian*, *Spherical*, *CD - First Edition*, *Rock'n'Roll* (shoot-'em-up strategy) *East v West* (Berlin 1948 strategy) *Winnietou* and *X-Out* (shoot-'em-up).

▪ Accolade previewed several games including *Bar Games*, *Blue Angels*, *Day of the Viper*, *Don't Go alone*, *Grand Prix Circuit*, *Hardball II*, accessories to *Jack Nicklaus' Greatest*, *Powerboat USA*, *Steel Thunder*, *The Duel*, and *The Third Courier*.

▪ Iansyst, educational software publishers, announced a new 'educational adventure games' package. From £21, it promises to cover basic maths and English. Good news for computer journo!

▪ WordPerfect launched version 5 of *PlanPerfect*, its massive spreadsheet program. The program is certainly impressive and for the power user even though it runs off 512K of memory. It is fully reviewed in this issue of Express. The company also announced *DrawPerfect*, a new presentation graphics package. 'Our customers

were using existing graphics software with WordPerfect applications' said WordPerfect's Marketing Manager, 'we decided to provide our own version in order to give our customers what they need'. *DrawPerfect* features bit mapped and vector graphics and the ability to perform slide shows etc. Expected in the first quarter of 1990, *DrawPerfect* will cost £395 in its single user version.

▪ The hypertext environment for PCs, WEB, was shown in its latest incarnation by Octave Associates. The £240 package provides an information management facility linking up to word processors, spreadsheets and other information.

▪ A George Formby of the 1990s might be cleaning windows in a GEM environment - or maybe the computers themselves. Microclean launched itself at the show, a new outfit dedicated to professionally cleaning and keeping clean your computer systems.

▪ Mannesman Tally introduced two new printers to its already extensive range - 9 and 18 pin models, priced respectively at £705 and £805 (£100 extra for colour) with stored energy print heads. These are capable of twice as much use as normal heads, claim the company.

▪ In the live desktop publishing theatre GST/Electric Distribution demonstrated the newly upgraded *Timeworks Publisher PC*, *Typografica* - add-on typefaces and fonts for existing DTP software - and there was also a talk and demonstration of Migraph's *DrawArt* and *ScanArt* clip art libraries.

The new version of *Timeworks* features support for HP Deskjet, NEC P6 and HP Laserjet Soft Fonts and extended support for the *Typografica* fonts.

▪ Many companies made use of data display devices in order to provide live PC screen demonstrations of varying quality (particularly poor was the WordPerfect projection). Advanced Visual



Products ■ company with long experience in the data display market launched the Medium On-Line 480mm Data Projector. The device provides live PC screens to VGA resolution and will work happily with the full range of IBM and compatibles.

▪ Datamaster's hand-held data managers, touted as more rugged alternatives to the Psion suitable even for the factory floor, were on display. The range includes portable printers, bar code readers and EPROM erasers. The press pack includes a cardboard model of the hand-held - echoes of the cardboard guitar?

▪ Level 9, known for its quirky adventure games, demonstrated its new products *Scapeghost* - an adventure in which you play a dead detective fortunately still animate as a ghost - and *H.U.G.E.*, which stands for 'Wholly Universal Games Engine', a games authoring system for role-playing/ walkabout adventures for the PC, Amiga and Macintosh. The company has decided that it won't produce any more text adventures after the latest release.



▪ Hewlett Packard unveiled its new laser printer the HP LaserJet IIP. It handles A4 paper, envelopes, labels and transparencies, and costs £1,299. The HP DeskWriter is an inkjet printer specially developed for the Apple Mac and works with all leading packages.

▪ Epson and WordPerfect were working together at the show, with Epson PC AX3s working various WordPerfect packages.

▪ Hybrid Arts launched a new range of music software for the ST: *FM Melody Maker*, turning the machine into a 9/11 voice synth, realtime sound previewing and sound balancing, a full-featured drum machine and comprehensive MIDI implementation - all for £69.95. *GenEdit*, a controller/ editor/ librarian works with MIDI equipment in ST or Macintosh versions.

▪ LocoScript PC finally made it, after almost a year of speculation. The old PCW program looks and feels virtually identical on the PC, and has the addition of an 80,000 word spell checker a la *LocoSpell*, mailmerge and reporting a la *LocoMail*, a database a la *LocoFile*, and all of *LocoScript 2's* quirky, but very successful, options such as Greek, Cyrillic, mathematical symbols, different typestyles etc. It's only at the demonstration stage, however, and Locomotive aren't planning to ship anything out until next year. *BASIC 2 Plus*, for the PC, was also on the stand for £49.95.

▪ Kuma's new products for the Amiga on display included *K-Comm2*, an Amiga-Psion Organiser link for £29.95; and *K-Roget*, a thesaurus based on *Longmans Pocket Thesaurus* for £29.95. For the ST there was the new *K-Spread 4*, and *Polyfyer*, an open relational database. A book on the Z88 called *Z88 Magic* was on sale for the first time too.

▪ Add-ons launched the world's first hand held colour scanner, the Cameron hand held. Featuring 12 bits per pixel and a 4096 colour palette the scanner is compatible with PCs and soon the Macintosh and ST. OCR and graphics software is included at the price of £449.

▪ Continuing its software integration theme, Computer Associates introduced several new packages alongside displays of the company's existing popular software. One notable application is *SuperGraphics* - touted as the ultimate in presentation graphics software.

Featuring auto or user controlled axis scaling, linear, log, date and labelled axis, text font size, colour, style and orientation selection and numerous graphing methods including pie, line, area, scatter and hi-lo charts *SuperGraphics* provides a comprehensive illustration environment. Cost? £495 + VAT.

▪ Users of popular network software such as Novel were pleased to discover FAXNET being demonstrated by FAX specialists Computerfax LTD. FAXNET combines the flexibility of local area networks running on PCs with the convenience of computer-based FAX by exploiting the network capability of peripheral sharing. Only one facsimile modem need be attached to the network for all other users to have access to the

service. Full system with half size fax card was selling for £1295.95.

- Little time and lacking knowledge? Then BusinessLand's *TimeSavers* launched at the show may be just what you're looking for. Already popular in the States, Timesavers provide the equivalent of one full day's training in a variety of computer subjects for a fraction of the cost. A Timesaver teaching program requires just 4 hours of your time but will take beginners, intermediate or advanced students to the next skill 'level'.

- Well known for its world beating range of chess programs, software house CDS launched another game which it hopes will become a classic. European Superleague is the company's attempt to produce the definitive football management simulation. Training schedules, tactical planning, squad morale and boardroom politics all add to the level of realism.

- Not new, but generating a lot of interest was Agenda's personal organiser. Confused punters tried desperately to control the Microwriter keyboard built into the machine with little suc-



cess, but despite the novel approach to data entry, the Agenda pocket machine proved to be very popular.

- Many computer users received their first sightings of the new Mac portable. Offering twice the power of the SE machine, the portable was presented to much acclaim on the AppleCentre stand.

- Punters weighed down by jingling cash bags flocked in their thousands to receive succour at stand 1400 where Compact Software LTD exhibited its range of professional range of accounting software Moneyware. The package is designed for use by those new to caring for money.

- Don't wait up for the Amiga 2500UX or AT. The former probably won't make it here because of the up and coming Amiga 3000. Some feel it would not be worth bringing in an inferior machine at much the same price. And the latter can be put together by buying a bridgeboard and an A2000 separately. CBM marketing whizz Jeff Earle called the machine "a marketing ploy that was appropriate for America but probably not here".

- The Amiga 3000 should be here in the first quarter of next year. Tech specs are thin on the ground but it might not be as expensive as some fear.

- Commodore really wants to get a 1Mb Amiga onto the market. The only thing stopping it is the price of DRAM chips. They're dropping so expect an announcement soon.

- It's possible that Amiga Operating System 1.4 may never arrive. Commodore is contemplating giving the thing a different name because it's so much better than 1.3. Lets hope it's not called OS/2.

- The Amiga console looks like it may never arrive. The firm has been working on it for a year but only at a low level stage. It's up to the marketing boys.●

GAMES NEWS FROM PC SHOW

- Probably the most noticeable company stand at the show was that of Ocean. Taking up the entire entrance end of the Leisure Hall with what must have been acres of blue canvas, the stand seemed to be attracting more gamers to its arcade machines than any other exhibitor. Taking pride of place in front of a vast video wall were two immaculately kept classic cars, a Cadillac and a Chevrolet, to promote the forthcoming film license of *The Untouchables*, which should be released across all formats by Christmas. Other games receiving hefty coverage were *Batman - the Movie*, *Cabal* and *Ivanhoe*, the last of which features some impressive animation from the creators of the Asterix movie.

- Another company relying on the punters love of desirable cars was US Gold, with a Ferrari Testarossa taking pride of place on their stand. The main item being promoted was the licensed Sega follow up to *Outrun*, backed up with model Ferraris and flashy posters, but



not with previews of the game unfortunately. Still, some excellent coin-ops (including the brilliant *Strider*) on freeplay to keep most people happy. The lack of new US Gold products was apparent by the presence of such coin-ops as *LED Storm* and *Last Duel*. However, anyone wishing to find out more from the people "in the know" could nip up to the US Gold presentation in the Westminster suite, where PR people and software developers could be found to answer any queries.

- One of the most interesting stands was Domark's. There was no doubt of the main product being promoted. With three arcade machines and all the reps in racing jumpsuits, *Hard Drivin'* came at you from all sides. On the coin-op side, players were very well catered for, with *Cyberball*, *Toobin'*, *APB*, *Xybots* and of course *Hard Drivin'* on free play. On preview were conversions of *Toobin'*, which is nearing completion on the Spectrum with other versions following shortly and *APB* on the Amiga, which has come a long way from the earlier demos. The game now features such wonders full-screen scrolling, overscan mode and a tinted information window as in the arcade original. But the most mouth-watering thing to see had to be the 16 bit versions of *Hard Drivin'* which are actually looking extremely good. The speed and style of the original have been captured wonderfully, a feeling echoed by the Domark software development man-



ager who said "*Hard Drivin'* will be the Christmas number one. Definitely". What is known in the trade as "sticking one's neck out".

- Apparently under a great deal of pressure were the team on the Hewson stand, since the main person was back at the hotel feeling rather unwell! Despite this, they did their best to please and put on their most helpful voice as they tried to explain their new releases. Mainly these included 16-bit conversions of Hewson's eight-bit successes. Most of them were Amiga and ST incarnations of budget games formerly on the Rack-It label, such as *Steel*, *Slayer*, *5th Gear* and *Battle Valley*. Other games on show were the Amiga version of Raffael Cecco's hit *Stormlord* and a new medieval combat game *Onslaught*. One point though, as Hewson has never felt the urge to take up converting arcade games, there was the conspicuous lack of any coin-ops to play, which may have explained why the stand wasn't as crowded as some others.

- It was interesting to see that Grandslam were promoting the fact that it has the license for the conversion of Sega's *Space Harrier II* and not *Elite* as most people expected. Also on show was the licensed Liverpool FC game, which contained some of the best digitised photographs I've seen on the Amiga. Most prominent on the stand was the new German label Thalion, to be distributed in the UK by Grandslam. Despite being a young company, Thalion had a number of games on show. These included



Chambers of Shoolin - a martial arts game, *Seven Gates of Jambala* - a Ghosts 'n' Goblins style scrolling platform game and *Warp* - a space shoot-'em-up. These are due for release in the UK over next couple of months on the ST and Amiga, with a PC RPG - *Dragonflight* - out soon. Perhaps the most interesting product was *No Sec-*

ond Prize, a 3D-filled vector graphics game which Thalion claims is "the fastest 3D ever. Faster than *Starglider 2*, even faster than *Hard Drivin'*". It did look extremely fast, honest, but the game won't be available until autumn next year, so whether it will still measure up remains to be seen.

- Virgin-Mastertronic's stand was centred around the distribution of the Sega consoles and games, including the full get-thrown-about-just-like-you-are-there-versions of *Power Drift* and *Super Monaco GP*. Again, the old video wall ploy was in effect, displaying Acid-House style graphics and blaring Stakker's "Humanoid" at great volume (you could hear it all over the hall, actually). Most space seemed to be given over to the eight-bit Sega console, leav-



ing the 16-bit Mega Drive and Mastertronic's own products in the shadows. A shame really, since a lot of people had expressed an interest in seeing the Mega Drive's new products in all their glory. Still, the coin-ops brought the fans in, and the PR people were kept busy.

- Interceptor's stand was mainly taken up with the promotion of the Pandora label. Its latest wares include *Outlands*, a shoot-'em-up, the classic mould (in other words shoot everything that moves and some things that don't) *Xenomorph*, an outer space role playing game with heavy arcade adventure overtones. Last (but not least) comes *Debut*. Based on the planet Earth in the future, the planet's surface has become uninhabitable. You play the part of an alien intelligence, who must reestablish the ecological balance of the world. Pandora spokespersons claim that the game lasts a lifetime, as an ecological system never reaches a conclusion. Oh yeah...

- One more thing, it was strange that Psygnosis had no new products to show, but was touting for new programming teams to sign up. Talent disappearing perhaps?

EXPRESS MAIL

Dear Reader

Another collection of comment, controversy, compliments... and Rob Ainsley's replies. Have you got something to say? Make your voice heard in computing's liveliest letters page! Send your contributions to:

Express Mail, 4 Queen Street, Bath, Avon BA1 1EJ

PS. Sorry, but we just don't have the time to give personal replies, whether you include an sae or not. We're too busy putting Express together!

NOT ENOUGH REPEATS

Will you be repeating/updating certain features in previous issues such as ST Essentials or Video Titling etc? How about making back issues of certain features available as back issues of the magazine itself are becoming more and more hard to get hold of. This would be an invaluable service to new readers as they could order a feature that they missed.

Finally, could you please stop publishing the humour section of the reader ads from immature Amiga owners trying to justify their computer.

David Brass

• **ST Essentials will be coming along regularly in our buyer's guide in Shopping Express. Generally we don't plan to make copies of features available; the idea is that a new feature will come along, updating all the old information, as soon as new products come out (which will only be a couple of months after the old one in all probability).**

AMAZING RESEMBLANCE

I wonder if any of your other readers have noticed the remarkable similarity between Mark Higham (of ST Format) and Kim Harmagh (of Express). I think we should be told.

William Haycroft

• **Are the two the same? Possibly. Possibly not. They say you're never alone with schizophrenia, though I'm in two minds about that.**

BEEB BEEB

Excuse me, but just what do you have against the Beeb? On opening Express 44, I was shocked to read Rod Lawton's opinions concerning my beloved machine. Sluggish? Uninteresting? A relic? Come on Rod. I'm not adverse to a bit of slagging off where it's due (e.g. Spectrums) but don't you think you know that the Beeb was the first computer which Elite was written for. It saw the first program with the criteria of a DTP package (AMX Pagemaker) and can

actually plot a Mandelbrot set - from a BASIC program - about three hours. (Six days? Pahl).

As the Beeb is no longer produced by Acorn, the only way you are going to get it is cheap. The sort of person who would find it suitable for their needs is someone who enjoys playing games, but also wants to use their computer for serious applications, such as letter (or book) writing, home accounts, DTP and programming (the Beeb is an amazing animal for programming). In other words, the Beeb is to computing what Ian Botham is to cricket (ha ha, a sarcastic tone of voice. The joke you are going to make was pathetic) - a great all-rounder.

Following the example of others before me, I have a black belt in a martial art: origami. If I hear one more criticism of the Beeb I shall fight my way into your office and turn all your junk mail from Readers' Digest into miniature models of Santa Claus.

Rafael Jay, Bath

• **And why not. Of all Ian Botham's records, the most amazing was that he once caused £800 of damage to a bar in Tasmania with Dennis Lillee. How can anyone cause £800 of damage to a bar in Tasmania?**

As for origami, it is an odd but true fact that our PC columnist, Simon Williams, had one of his origami designs published in a Japanese paper folding manual. It was not an all-paper 2086, but a windmill.

DISKUSTING

I would like to comment on what Mike Dunn said in Gameplay (Express 46) concerning a 3.5-inch disk version costing £5 more than a 5.25-inch version on the PC.

The price of the product in question leads me to ask how manufacturers, who always claim high prices of ST and Amiga games are due to lack of hardware sales, can justify between £30 and £35 for a PC game; I believe I am cor-

rect in saying it is the biggest selling computer ever?

Colin Howard

• **The price of a product is never based solely on the materials in it; in that case, the price differential would be absurd. But software houses have to base the price of a game on expected sales amongst other factors, and it may well be that they expect to sell fewer 3.5-inch versions than 5.25-inch. Making it necessary to create a price difference. There's a similarity with hardback books and paperbacks; the actual price difference in terms of manufacture is a matter of pence, but the lower expected sales figure of a hardback makes it necessary to give it a price tag of a few quid more than the paperback. The same can be said of hatchbacks and estate cars.**

BATTY

While battling against crime in Gotham City, I am beginning to realise the need for an even more computerised approach. However, because I sleep upside down (as a bat does) I need a computer that defies gravity and sticks to walls. I have so far found only one ideal computer, which is advertised in the Comsec ads in the last few issues - or would an Amiga and double-sided sticky tape do the job better?

Batman, Croydon (near Gotham City)

• **Hey, all you kids at home, don't try to do what Batman does. Especially walking around in tights with your underpants outside your trousers.**

TASTE OF MONEY

I am a regular reader of your magazine, and despite one or two niggles (the main one being that, in my opinion you devote too much space to games) I enjoy it very much.

Express 46 had a letter from JC Keilaus asking for information about the companies offering wonder schemes for making money with your computer. My advice is DON'T GIVE THEM A PENNY!

I made the mistake of doing so, and I feel that I have been taking for a ride. I paid £13 for what basically consisted of a few poor quality photocopied sheets which were mostly adverts for other 'wonder' money making schemes. I am enclosing this literature so that you can draw your own conclusions; I have not written to complain out of sheer embar-



• **How to save £££££ - don't send your money to money-making schemes, says David Baron**

rassment, and I feel ashamed that I have fallen prey to such a scam.

Even worse, my doormat is being bombarded by mail from dozens of people offering me money making schemes which if they are legal, are certainly not morally acceptable to me! Take my advice JC, and everyone else considering patronising such companies, and keep hold of your money, and might I request that Express does a bit of 'checking out' of these people; after all, a lot of readers must be patronising them in order for them to be able to continue placing adverts in your magazine....

David Baron, Leeds, Yorkshire

• **David encloses a wodge of material from these companies, and pretty tatty they look - certainly none of them look convincing. We're planning a feature on them soon. Thanks for writing and letting us know what we might be letting ourselves in for!**

I think the thing I find most depressing is that your name is now being hawked around, no doubt as part of another money making scheme itself. I think mailing lists, along with the internal combustion engine and the packaged instant hamburger, are doing more damage to civilisation than Enola Gay, Ivan the Terrible and the Mongol hordes put together.

PILOT SCHEME

Back in May I ordered F16 Combat Pilot from what I thought at the time was a safe mail order company. However, a little time before the program was finally released the mail order firm disappeared. I imagine they went bankrupt; but I have no way of knowing for sure - they won't answer my letters, and their phones have not been manned for weeks. The company is Homsoft and they used to advertise, quite regularly in your magazine. Do you know what has become of them? Or how I can recover my money?

David Susswein, Eastbourne, East Sussex

• **Sorry, we can't get in touch with them either. I'm afraid there's very little you or we can do.**

PD PRINCIPLE

I am interested in setting up a public domain club for the Atari ST. I am doing this to try and help people who want PD but cannot afford it. I would also produce a disk magazine where pen pal contacts could be established, and would incorporate the catalogue. I have tried twice to advertise this service in your classifieds, but you have not printed the ad.

Martin Paley, Blackpool, Lancs

• **We can't run free ads for profit making libraries in Shopping Express, but if you make it clear you are just running a local club in your ad that'll be OK. But don't start out with any illusions: there are hundreds of PD clubs out there, there's a lot of competition, and it will almost certainly end up costing you money and spare time to run it rather than making any or even covering costs. By all means go for it though.**

FLIGHT OF FANCY

Are software houses like Microsoft and Digital Integration making any plans to release *Falcon* or *F-16 Combat Pilot* for the Archie? *Interdictor*, the first flight sim for the machine, is soon to be released and looks good.

Awais Hameed

• As far as we know there are no plans at the moment, but we wait with interest.

THE PRICE OF GAME

Yup, this is another one. I believe that games prices are as bad as they are simply because software houses think that they can get away with it. I mean, most 16-bit games aren't worth £10, let alone £20 or £25.

A lot of my friends say how good the games for my ST are, but when you compare the playability of most (though not all) £20 pound 16-bit games to that of most £5 eight-bit jobs you have some pretty rubbish stuff.

The only way to make software houses bring their prices down is to stop buying games completely, to resist the temptation of collecting all the 'ultimate shoot-'em-ups' and make the software houses beg us to buy their games by bringing their prices down. I know that there are many cynics out there in computing land who will say that people just wouldn't be able to resist the temptation. Well, computer cynics of this world, I believe people would, and anyway, it would give the houses time to develop some decent games for us to buy at their low prices.

Anyway, the houses are doing themselves out of more profit because the cheaper games are, the more people are going to buy more games, so, for a little bit of loss early on, they could well make a lot more profit later on, and they'd have a much happier consumer.

So right now, I'm calling for a complete game buying boycott.

Camden Holt

• Ah, Camden, if only the economics of the real world worked like that! We could bring Express down to 6p an issue and according to your theory we would sell many copies that we'd make more profit... Unfortunately a boycott of game buying would have the same effect on the software houses as that on us if nobody bought Express for a year - i.e. send us into liquidation, put me out of a job and a living wage, and thereby send the Ruposhi Indian takeaway round the corner out of business too.

TT RACING

I was fascinated to read your conclusion to your review of the Atari TT in Express 44. I compared it with Acorn's Archimedes 420/1 at just over £2000 including VAT, which you have never had a good word for in terms of value.

Like the TT, it includes a hi-res colour monitor, and a hard disk, albeit only 20MB. However, it also has eight channel stereo sound, loads of screen displays (including a 640x512 in 256 colours - nearly twice as good as the TT), a RISC chip, a multi tasking OS with memory management etc. And for all you jingoists, it is British designed.

What I am saying is that you have a

completely unjustifiable bias against Acorn, or you have missed out a lot of the details about the TT. Any potential TT buyers should, knowing Atari, wait a few years until the price is halved and the machine is offered with a substantial software bundle. And in the meantime... may I suggest an £800 A3000...?

Jeremy Benson, Bedford

• Well, it's all horses for courses, innit? I mean, it's as broad as it's long. Don't think about it, that's my philosophy.

BIG BALLS

Ah-ha! Now I know where the last 'Prisoner' balloon went. It was painted yellow, had a wavy line drawn over it and was sold to Sega for the *Passing Shot* ads. What's going on here? Is this really a true indication of the relative size of ball and players? I guess their next sports offering will be rugby played with a zepelin.

Don Howard, Croyley, Kent

• Then you'd get people with those execrable stickers in the backs of their cars saying 'You need leather zeppelins to play rugby'.

STE FOR TWO

It is obvious that the Amiga is superior to the ST. Even Atari seem to think so. The new STE has all the things that make the Amiga so much better than ST improved. This obviously shows that Atari did not believe the ST to be good enough before. However, they still have not come close to beating the Amiga. The graphics are still not as good and according to your own review, neither is the sound. The only good thing about the STE is the option of having six joysticks.

By the way, I couldn't see the "conspicuous E on the nameplate" of the computer photographed for your review.

Matthew Baker

• Ah! That's because we were using a technical device called 'irony' where you, sort of, say one thing, but mean another. But maybe you couldn't see that either.

RE JOYCE

If you can't beat 'em join them so here is proof positive that my Amstrad PCW8512 is far superior to those other peculiar conglomerations of silicon-chipper.

1. My Amstrad is better than an Atari ST because of its monochrome screen, so my wife cannot beat me at those dreadful multi-colour shoot-'em-up games racing around on the blitter chip that the standard ST hasn't got.

2. Ditto for the Amiga, because I haven't got a HAM mode of 4,096 shades of red, blue and green inside the machine, which no-one can see unless they've won the pools and can afford the high resolution colour monitor necessary to display them.

3. My PCW is better than the PC-compatibles, because its smaller user memory of 61K TPA allows the programmers to write tight, efficiently coded programmes, instead of forcing them to produce bloated monstrosities full of features that most users don't even discover, let alone use.



• The PCW is better than the Amiga, ST, Cray, NCube and Deep Thought put together, reckons John Smart

4. An Amstrad has got to be better than all the QLs, Dragons, MSXs, Orics etc. because they've all been flushed down that great big lavatory in the sky

5. An Archimedes is no good in comparison, as the eight-bit PCW hasn't got a 32-bit RISC chip buried in its vitals, with a load of boffins standing around scratching their burns and wondering where the other 24 should go

6. It's safer than the original 48K Spectrum because it doesn't encourage sexual perversion by compelling its owners to continuously run their hands over a dead-flesh keyboard

7. My 8512 is much more fun than a Commodore 64 because instead of having to watch boring old strip-poker games full of naked women in glorious technicolour, I can do my pornographic thing leering at women undressed in black with green private parts.

John Smart, Hitchin, Herts

• Ha, that's nothing. Next week I shall prove that the England team is better than the West Indies, that cutting down the rainforests is good for the climate, and that refusing to fund the researchers in North Wales who wanted money to develop their world-beating neural network gives them that edge over their competitors.

MSXTREMELY ANNOYED

I have always enjoyed reading your magazine, and look forward to each new issue. However I have noticed in Express Mail of late some rather unnecessary and inaccurate sarcasm being directed against the MSX computers.

I have always appreciated the humorous content of your replies but feel compelled now to speak up on behalf of all those owners of this much maligned machine. My first computer was an MSX, and though I admit it was poorly supported by the software industry, it was certainly no worse a machine technically than all the other eight-bits available and taught me a lot about computing. It was also well made - mine is still going strong after five years.

As you have a regular column for the MSX, along with other less popular machines, I assume that a lot of its users read your magazine and, like me, they probably find your remarks unfair and hurtful, especially if they are unable or unwilling to upgrade to a more up-to-date or popular computer. I now have an Atari ST but my humble MSX gave me hours

of pleasure, so please think of all your readers before making any further comments.

The same goes for 'Uncle Techtip' whose column I generally enjoy.

Please keep up the good standard of the magazine without resorting to 'campaigns' against the less popular computers.

WH Alexander, Plymouth, Devon

• Irritation is the sincerest form of flattery, or something like that. You can't say we're not even handed about this: we also insult the PCW, the Amiga, the ST, the BBC...

HEY, AMIGA

I have read every local Amiga magazine, but I like to try foreign Amiga magazines. Could I purchase any Amiga magazines from America? Could I buy them in England?

P Kwong, Taunton, Somerset

• Hmm. Well, far be it from me to recommend anything apart from Amiga Format, our sister publication which is really jolly good, so I won't. Besides, with their ridiculous lead times, US computer magazines are several months out of date when they go to print, whereas ours are bang up to date.

They're also full of nauseating adverts, the writers can't put down a dozen words of their techno-junkie nonsense without using the word 'I' at least 12 times, and they can't spell properly. Why bother? (Wave Union Jack, sing Rule Britannia, vote for Margaret Thatcher, etc, etc)



• Why buy American trash when you can get this from your local newsagent? Don't support Uncle Sam and his outdated advertisement-led sycophantic sponsored techno-twaddle. Back Britain! Buy British!

EXPRESS MAIL

LETTERS

JOB'S WORTH

According to what I hear in the press the computer industry is short of people. The computing industry say that not enough people are interested in making a career in computers and that they will be some 20,000 programmers and operators short in a few years. Yet according to every computer department I have been to, they have got quite enough computer people thank you very much.

Now my question is if the computer industry is so short of people (and are always complaining about it) why can't I get one of these jobs? I would love nothing more than get a job in the computer industry, but from what I have seen the industry is quite happy to stick their head in the sand and say we can't see anyone who wants a computer job.

Maybe the answer would be for them to take their head out of the sand and open their eyes or ask their guide dog for a second opinion. I have certificates in word processing, databases and programming in BASIC; I know these will not make me the next designer of the NCube but I would like a chance to make a career in the computer industry and I'm sure that someone like myself who are genuinely interested in computers would be a good investment.

PJ Clews, Crewe, Cheshire

• Well, I don't know what to think. We're still waiting for an employer to give us their views; it's a rum do all round. All I can suggest is that you check out the computer jobs section in Shopping Express.

KICK IN THE ARTS

What has happened to the art gallery section you mentioned a few months back? Are you starved of good work? I'll have to be sending you a couple of pieces (when I get my computer working).

How about some more sexist ads, software companies? They help keep up the steady flow of complaints in the letters pages from all you Mary Whitehouse clones.

Mr Giles, Obscene 2

• We shelved it because we didn't get anything worth publishing.

More sexist ads? What makes you think Mary Whitehouse clones read Express? Do you think the dear lady has a PC Engine or Amstrad CPC lurking in her cupboard?

GROUP DYNAMIC

I am writing in reply to P Bocij's letter about me in Express 45. The idea of a user group for the unemployed ST owners is undoubtedly a good one and under the management would be a benefit to anyone unfortunate enough to be out of work (although how they could afford to buy an ST, let alone original software is beyond me).

However, Mr Bocij completely missed the point of my earlier letter. What I was saying was that I did not think it right for a person to advertise as a user group when all they clearly wanted to do was to pirate software (there are easier ways to do this, such as advertising for contacts in various publications) and I felt it unfair

for him to be awarded a free subscription for his illegal activities.

I myself have had copies of pirated software, but always ended up buying the original games I liked and trashing the bad ones. I am a student and can think of better uses for disks than to keep such games as Pacman, Red Heat, Out Run, Enduro Racer and about 100 other games I have had copies of which I trashed within one week of receiving them.

Software companies only have themselves to blame for piracy as they expect computer owners to pay up to £25 for such rubbish and then they have the cheek to complain when their software sales fall!

I had copies of Gunship, Populous, Dungeon Master, Captain Blood, Hostages and about 20 other games which I played once and liked so much that I bought the originals. There are other originals I bought after hiring the games from hire clubs which existed before the recent legislation which banned such clubs. The recent legislation will only serve to make more people pirate software since they can no longer hire a game to try out first.

Dave Palmer aka Demon Dave, Jarrow, South Tyneside

• Yawn. Er, yeah, thanks for your letter, Dave. Um, yeah, piracy, er, it's not nice, so don't do it. I can't be bothered to go through the old arguments again...

BOUQUET SHOP

I am writing to tell you about the excellent service I received from Evesham Micros. I ordered a monitor with ST cable which arrived two days later. Unfortunately the cable would not fit the monitor. On the Thursday I phoned Evesham who said they would replace it. I received the replacement by return of post. This shows that some companies do care about their customers and the service they provide...

Miss J Lord, Selby, N Yorks

• Well done, Evesham! A New Computer Express pencil is on its way to you.

PILOT SCHEME 2

After reading all the rave reviews of Digital Integration's F16 Combat Pilot - including yours - I bought the Amiga version. It is indeed a good game, but I was surprised that none of the reviews mentioned the following points which I don't really expect in a £25 game. Or perhaps, nowadays, I do expect them.

1) This British game has an American NTSC screen display, ie over 20% of it is blank. I don't understand why the normally vociferous UK Amiga community seems happy to accept this. Commodore has published all the data needed to write for both NTSC and PAL so there's no excuse. Companies which can't be bothered to support UK users don't deserve our custom.

2) The disk is heavily protected, and the noises from my poor drive while loading make me wince. With the Amiga being totally reliant on its drive for everyday use, it's stupid to wrench it like this just to play a game. Surely protection is pointless when the manual is needed as

EMULATING SUCCESS

Regarding J Hanson's letter claiming he had produced an Amiga emulator for the ST (Express 45) I am in the final stages of developing a piece of software for my (recent TOS version) Atari which will allow me to run 99% of Atari software. This I feel is a much greater achievement than, say, an Archimedes emulator for the Acorn Atom, or a Cray emulator for the UK101.

As for the Console vs Computer debate, the only reason you buy a games console is because you want amazing sound and graphics, and an assurance that when you buy a game it will be at the very least good. The only reason you buy a computer to play games, is that Joe Soap down at the com-

puter club has a box of games he can copy for you for the price of a few blank disks, rather than fork out £30 odd quid for the average bit of alien bashing. Lets face it, we'd all love to buy the actual arcade machines, but it seems a lot more sensible to buy a computer that

1) pleases Mum and Dad because they think that their son/daughter will automatically become the next Einstein and will earn £10,000,000 a year as a top programmer.

2) pleases Johnny/ Jane because they can play lots of games for next to nothing that they have copied from a friend.

A console does not appeal as readily because

a) mum and Dad probably won't finance any of it,

because it "only plays games"

b) Johnny won't appreciate the fact that several weeks' pocket money will be needed to buy each game, and he can't copy his friend's Afterburner cartridge.

Aonghus de Barra

• Hmm. Parents who want their offspring to emulate Einstein might not be so keen when they find out that he got a dismal degree from his university (the equivalent of a third from Zurich), hated exams, got a hum-drum job on graduating (clerk in a Patent Office) and couldn't program at all (as computing didn't really start until after he died). He was, however, a Man of Peace and was offered the Premiership of Israel, so there you go.

a source of 'passwords' before each flight? The inability to make a playing copy is a big minus for me, and I wouldn't have bought F16 if I'd known. D.I. needn't think that I'm going to spend another £25 when the master disk becomes unreadable.

Digital Integration's disregard for UK customers, together with over-protection at its most paranoid and obstructive have made me realise the reason (apart from profit) that some people 'crack' games. I can't really fault the game itself, but what's the point of wonderful gameplay and good graphics if they're squeezed into a window smaller than the screen, and hidden behind protection routines that will, at the very least, upset disk drive alignment sooner rather than later?

Stephen Mercer

• Take heed, Digital Integration!

ENGINEERING

Yes, the PC Engine is overall a better games machine in terms of amount of games that's available for each that's

playable. There are several hundred games for the Amiga, but only a small percent of them are up to the high standards of the Engine's.

The question is, can your machine output six channel sound (the ST and Amiga can't), and handle 32 colour on full screen (overscan) with super fast (have you seen stage nine) vertical (plus side to side) parallax scrolling with tons of moving sprites of variable sizes without a flicker, which is what Gunhed is doing? However, the Amiga may not need Gunhed, as the guys who produced Hybris are bringing out a fantastic looking shoot'em-up called Battle Squadron, a sort of Hybris II with dual players.

Personally, I think Kick Off is better than Gunhed.

Onn Lee, Nottingham

PD OR NOT PD

As a great reader of your magazine I have noticed something - there's no Public Domain section!...

Neil Mansell, Canvey Island, Essex

• We're looking in to it. •



• A real F16 doesn't suffer from narrow American screens

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SAVE YOUR OWN WASTE PAPER

You can assist the recycling process by keeping your waste paper and taking it to your local recycling skip – there's one in most council tips. Recycling could, according to the Friends of the Earth, save Britain up to £1 billion in imports and provide 22,000 jobs.

MAIL MERGERS

Check out the selection facilities on your mail merger. When doing a mail shot, write your form letter so that it selects only people who really will be interested in what you have to say, rather than churning out a letter to everyone in your address list. For

example, if you're sending out a catalogue to customers, select just people who have actually bought something from you recently. Keep your addresses up to date, and remove any names you haven't heard from for over a year, say.

NON CFC KEYBOARD/ SCREEN CLEANERS

Use an environmentally friendly cleaner from your local supermarket. If it's a spray, make sure it's non CFC and preferably pump action. Use a lint-free cotton cloth or bit of old sheet.

DON'T GIVE YOUR ADDRESS

Computer shows are notorious sources of mailing lists – you can end up with dozens of catalogues and utterly pointless brochures trying to sell you stuff you don't want, wasting tons of paper. So don't give your address at registration unless you really have to. If you find yourself on a mailing list, write to them telling them to take you off.

RIBBON RE-INKING

Printer ribbons are energy-intensive products – but they can all be recycled. Fabric ribbons can be re-inked, and there are several proprietary sprays which do this: you open the plastic case, spray the ribbon, close it and re-use. You can re-use the ribbon dozens of times like this and the quality is good. One such spray costs £8.95 from Caspell on 0202 666155.

However, the spray cans contain CFCs, which destroy the ozone layer, which is linked to skin cancer. An alternative is to use an old toothbrush and standard inkpad and manually brush the

exposed strip of ribbon with the inked toothbrush, moving the ribbon along as you do so. A blob of Tippex or Liquid Paper on the ribbon marks the start point for you.

Refilling laser toner cartridges is also possible. Check the DTP magazines for addresses.

VDU RADIATION

VDU radiation is now recognised as a possible cause of miscarriages and impotence in long-term regular users. Taxan (0344 484646) and Philips (01 222 0833) do monitors claimed to be very low in radiation. You can buy radiation shields though these are expensive. For your own health the best precaution is to take regular breaks from VDU work, at least 10 minutes per hour, and not to spend more than four hours a day in front of your monitor.

CRUNCH AND SQUEEZE

Disks are energy-intensive products. Keep backups, of course, but don't use more disks than you have to: utilities which 'squeeze' files, storing them in a condensed form which can later be 'unsqueezed' if you need to use them, are available for every computer, reducing the size of a file by up to 50%. On a PC use Pkarc, available from any PD library (try Eigen on 0793 611270). Arc is available on the ST (try Wizard PD on 0734 574685). On the Amiga there are lots of file crunchers like this – try George Thompson on 0770 82234. On the PCW use NSWP available from Advantage on 0242 224340. A simple way of reducing the size of backup files is to save word processor documents as ASCII.

SECOND HAND MARKET

'Recycle' your old computer gear by selling it through the Shopping Express pages. Similarly, buy second hand if you can. Not only is it cheaper, but second hand computer hardware is often in just as good condition as new stuff and saves the wasting of several kilos of plastic and packaging. ●



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WHAT'S THE BEST COMPUTER TO USE?

Generally, the one you've got, but it does depend how ambitious you are. If you have heaps of cash, and would like to look really professional, get a £3,000 Mac II. It is normally accepted that the Amiga is the best home machine for graphics, and this is entirely true if you wish to do highly detailed and amazingly advanced stuff - and all the 16-bit machines are better for animation. But with 8-bit machines art is still fun, so start there.

WHAT'S THE BEST ART PACKAGE TO BUY?

Highly recommended would be Electronic Arts' *Deluxe Paint III* for the Amiga and PC, the same company's *Degas Elite* for the Atari ST, and Rainbird's *OCP Advanced Art Studio* for C64, Spectrum and Amstrad CPC. Where all these score is that they are easy to get to grips with.

SO I DON'T NEED ANY ARTISTIC TALENT?

No, none at all. The big benefit of computer art is it lets you cheat in so many ways. You can't draw a perfect circle, the computer can. You don't have to start from a blank screen, you can mess about with something that's pre-prepared, such as a drawing by someone else or a scanned or digitised photo. And if you get something wrong, you can either undo it straight away, or go back and change it later on.

Art files are just like any other computer files, so you can store a picture under a certain name, load it in whenever you want to change it, and save it off either obliterating the old version, or keeping both old and new. Sure beats screwing up your paper and starting again.

HOW DO I PAINT A PICTURE, THEN?

That's dead easy. Instead of a pen and a piece of paper, you'll be presented with a blank screen and a pointer. The pointer acts exactly like the nib of a pen or the tip of a brush, drawing wherever you take it. On 16-bit machines, the pointer is controlled by a mouse, but on the older eight-bit ones usually by a joystick or just the cursor keys. The pointer is also used to bring up menus that control file options and other features of the program.

Clever thing is, though, the pointer doesn't just draw thin black lines. It can draw like a pen, or a brush, or even an airbrush, in any colour and in a wide range of sizes. These different paint tools are known, obviously, as 'brushes'. You can even make the kind of paint you use transparent, so that it doesn't cover up what's already there. And remember the old gag about cans of rainbow or tartan paint? Yep, you can choose a brush to paint combinations of colours, too!

IS THAT ALL I CAN DO?

Far from it. Most art packages will let you put in text anywhere on screen, or make the computer draw shapes, such as circles and rectangles. As well as simply painting on colour, you can choose areas, such as the background or a particular shape, and fill them with an appropriate colour or even a range of colours. These are known for obvious reasons as 'fills'.

There are many different kinds of fills, particularly interesting are 'graduated' fills, that fade from one colour into another. You'll also find you can put patterns or textures in as fills or as brushes.

CAN I USE THE SAME BIT TWICE IN ONE PICTURE?

Yeah, and funny you should use that word 'bit'. The computer stores the picture displayed on your screen as a 'bitmap', so called because the

Painting on a computer is no more difficult than scribbling with crayons on a piece of paper. Just grab an art package, boot it up and get instantly creative...



colour and brightness of each pixel on the screen is described by one byte in the memory. This is handy, because the computer can pick any piece of the bitmap and reproduce or play about with it, because it knows how to manufacture that piece.

This means you can choose any part of the screen, cut it out, and stick it down somewhere else. Or duplicate it lots of times. Or flip it over to give a mirror image, or rotate it, or stretch it, squash it, bend it, or heaps of other things. It also allows you to zoom in and magnify bits of your picture so you can work on them in detail, seeing each individual pixel clearly. With all this power at your disposal, you can begin to do some pretty fancy and exciting computer art.

WILL I BE ABLE TO DO THE SORT OF STUFF WE SEE ON TV?

Like 'Catchphrase', you mean? Your dog could do that. If you mean TV station 'idents', like the big Y that vanishes into a pool of liquid gold at the end of Yorkshire TV programmes, that's a bit adventurous. Moving (animated) graphics aren't difficult to get into on the 16-bit machines, especially with *Deluxe Paint III*, but the kit that produces TV graphics is extremely expensive and very powerful. With vector graphic techniques, you can produce *Tron* or *Elite*-like wire frame animations. Or you can get into ray-tracing, which lets you produce beautiful, detailed pictures with those tell-tale reflections and shining points of light.

WHAT IS RAY-TRACING?

Ray-tracing is a mathematical way of working out how rays of light would reflect off shiny surfaces.

It's what produces those famous ball bearings bouncing above chequered backgrounds. All you do is draw your basic shapes and decide where the light source should be. The rays of light are calculated by the computer, a process known as 'rendering', which is unbelievably time-consuming because of the amount of calculation involved. A half-way decent render can take upwards of a day.

AND WHAT'S THAT VECTOR GRAPHICS STUFF?

Ah. If you only want a wire-frame drawing or animation, it's made up of lots of lines, and as a line can be described simply by plotting two points, you don't need to store all of the bitmap for a wire frame in memory, just the beginning and end of each line. The computer draws the lines afterwards.

WHAT ARE THESE SCANNERS AND DIGITISERS?

All these do is take a picture of something in the same way a video camera does, but because it's a picture on a computer screen, not on a TV, it's instantly recorded as a bitmap. Which means you can load it into an art package and play around with it all you like.

CAN I PRINT OUT MY MASTERPIECES?

Sure enough. You could just take photos of them: if you do this in a darkened room with the camera on a tripod, and use a wide aperture with a slow shutter speed (a half to an eighth of a second), you'll get good results you can blow up very large. But any compatible colour printer will produce reasonable results. The Star LC-10 and the Okimate are reasonably-priced choices. ●

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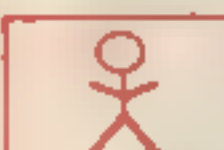
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When you fly into Nice airport you realise quite quickly that the French are Not Like Us. For a start, the customs men are armed to the teeth and then the bar looks like a decent place to sit in if you fancy a beer (unlike the Heathrow Vomitorium). Also, beside the Air France check-in desks, there are a handful of computer terminals built into the wall.

Okay, there are computer terminals at Heathrow used for flight reservations, making sure you're always put beside an improbably fat man who smokes a pipe, that sort of thing. But these are different. The keyboards and monitors point towards the passing public. They're designed for use by the airport's punters. Anyone can walk up and interrogate a database of names and telephone numbers – handy if you've just arrived and want to call someone you know who lives locally.

However, this is not some special service provided by Air France, or even a wheeze of Jacques Médecin – the dynamic and publicity-hungry politico who rules Nice. This is Minitel, a nationwide videotex service provided by the French telephone people.

Introduced in 1982 as part of the rationalisation and updating of France's public telecommunications network, Minitel is a remarkable example of what can be achieved with a bit of forward-thinking and dynamism. Anyone in France who has a telephone can have a Minitel – a small computer terminal which plugs into the same socket as the phone. Unlike many videotex terminals, Minitel provides a full alphanumeric keyboard (not QWERTY though, the French use a different – AZERTY – layout to reflect the relative importance of different letters in their language) and a dedicated display which means you don't have to disable your TV to use the system.

Minitel was originally introduced as a way of improving the country's Directory Enquiries service. In the late 1970s, it was realised that a fortune was being spent on printing telephone directories. Also, the dial-up enquiry number was manned by people who had to look up each number requested in a series of massive books. The end result of this was a level of inefficiency which made BT's 192 look like a model of professionalism. The first step was logical enough – put all the numbers on a computer database to speed up the enquiry process. The second step was pretty clever – the Minitel terminals could be given to private households, letting them do the hard work of finding numbers and removing the need to send out costly, parochial (and instantly out-of-date) paper-based directories. The final stage was genius.

Instead of limiting the system to in-house facilities (the directories, lists of telephone charges and the like) the Minitel system was opened out to include facilities which provide anyone in France who wants it with a combination of Prestel, Telecom Gold and a hackers' BBS – all for free.

Data communications is regarded as a nightmare even by highly computer-literate people.



• The French are developing systems which allow video telephones to be widely available

THE FRENCH CONNECTIONS

Mike Hardaker looks at Minitel, a computer terminal anyone can have and which costs nothing – as long as you live in France

The problem is that there is a complete lack of agreement over standards, making a mind-blowingly hit or miss for one computer to talk to another unless both have precisely the same comms hardware and software. Minitel provided a user-friendly nationwide standard, so suddenly thousands of people who had never been told that comms was difficult were able to see how easy it could be.

And with access to a wide range of information services, including financial, chatlines, email, weather forecasts and infamous porn and 'dial a hooker' numbers, the general public suddenly discovered something which had always been a well-kept secret known only to hackers and comms perverts – that communications is addictive. There is something about having a conver-

sation with someone on a keyboard which keeps you hang on. Or rather it keeps you from hanging up – the French PTT made record profits as people racked up massive telephone bills courtesy of Minitel. Some unfortunates were bankrupted by their telephone, but most users took Minitel for what it was – a useful and entertaining tool.

Of course, as soon as you have a system, someone will try to buck it. France's equivalent of The Great Prestel Capers, where two gifted hackers opened the Duke of Edinburgh's Prestel mailbox and had a good rummage around, is the Duck Hack. According to Hugo Cornwall's seminal *The Hacker's Handbook*, a journalist on the weekly magazine *Le Canard Enchaîné* claimed to have got into the Atomic Energy Commission's files from a Minitel screen and looked at details of laser projects, nuclear tests in the Pacific and other such ephemera.

Another journalist was the victim of a hack, not the perpetrator. He had managed to insult a couple of political extremists (an occupational hazard for journo's, in any country) who responded by hacking his personal files and distributing them to all and sundry – red face time for the journalist.

France is not happy to stick with Minitel. In various parts of the country, videotelephones are under test – you can actually look at someone while you talk to them on the phone. Although this presumably puts an end to telephones in the bathroom, the possibilities for business are immense. Unfortunately, the costs are prohibitive at today's prices but when the costs come down the French will be ready to move.

The future is now, and it's here. OK, not exactly here, but a couple of hundred miles away. Roll on 1992 •

• Minitel's console allows access to facilities rather like our own Telecom Gold and Prestel, but it's very much more widely used than in this country



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 - (iv) Massive reductions on hardware - at least 10% off M.R.R.P.

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PC SHAREWARE

PC-Write V3.02, Galaxy, Chiwriter, As-easy-as, Paradox-demo, Quattro-demo, Reflex-demo, Sprint demo, Powermenu, Small C compiler V1.1, LabelMaster, PC-Spell, Kermit, Vanilla Snobol 4, PD-prolog V1.2, Fig Forth, Xlisp, SPAWN, Filthy Humour 1, ESIE (all 1 disk), PC-File +, PD-Prolog, ZComm, Modula 2, (all 1 disks) PC-Calc+ (3 disks), Window boss (4 disks)

ATARI SHAREWARE

VKiller V2.2.0, Diskscan V1.0, Mark Johnson C Compiler, Alarm Clock (accessory), Dcopy V3.02, Viruskiller, Turtle V3.0, Penicillin, CHKFMt, Unixhead utility, unix diff utility, Filthy humour.

PC's

Amstrad 2086 30MB Hard Disk (720K FD) 12" mono + Lotus Symphony...£920.00
Philips PC 20MB Hard Disk (720K) Fst mono...£851.00
Commodore PC-20 III 20 MB Hard Disk (360K FD) 12" Mono...£920.00
Opus PC III 20MB Hard Disk (360K FD) 12" Mono...£1150.00

COPYRIGHTED SOFTWARE

Wordstar V3.4 (£230), MS-Word IV (£357),
DBase IV (£460), Lotus 123 (£360), Wordperfect V.5 (£345).

PRINTERS

Amstrad DMP3160 (£160), Epson LX800, (£290), Panasonic P1081 (£230),
Cannon PJ1080A (£506), Siemens PT881 (£450).

LASERS

HP Laserjet II & Toner (+ 12 months on site) £1955, Qume laser 10 plus
£2619, Epson GQ3500 £1610.

CUMANA DRIVES

Atari 80 Track 3.5" (Also Amiga Version)...£95.00
Atari 40/80 Track 5.25" (Also Amiga Version)...£125.00

4 Ivybridge, Birch Green, Skelmersdale, Lancashire, WN8 6RR

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4. The order including the voucher must be received by the advertiser before the closing date printed on the voucher.

5. You must fill in the details on the voucher.

THE SHOPPING EXPRESS BUYER'S GUIDE TO DTP, GRAPHICS AND DIGITISERS

The computer has revolutionised the publishing industry. With some software and a few hardware add-ons it's now possible to create entire documents on screen, complete with photographs and illustrations. To find out what's available, read on...

From paste-up to PostScript, the world of desktop publishing has arrived on your micro. ■ whether ■ a club newsheet or a magazine like Express, there's a variety of packages to suit your needs.

Desktop publishing sells computers. ■ massive growth ■ recent years on the Apple Macintosh and PCs has spawned a wide range of products for other micros. But you could easily spend £10,000 on a system so what should you look for if you've only a few hundred at your disposal? Express looks at the DTP packages that will allow you to input, import and edit text and graphics in a friendly environment. Last week we looked at scanners, ■ for good measure we also include a round-up of another means of importing pictorial material into your publishing efforts - digitisers.

PC DTP GUIDE

It's best to ■ for GEM-based DTP packages as they all offer output to dot-matrix and laser printers - and the device-independent, page description language PostScript used by professional printing companies.

● VENTURA PUBLISHER V2

Rank Xerox 0895 51133
£914

A GEM based heavy-weight supporting documents up to 999 pages, and offering master templates, style sheets and text import. A comprehensive range of features with precise control over layout and typography ideally suited for technical applications.

- ▲ Complete PC DTP for business and technical documents
- ▲ Fully automated text entry and layout

- ▼ Can't flow text around graphics
- ▼ Expensive

Value for money ★★★

● PAGEMAKER 3

Aldus Europe 031 336 1727
£800

Running under Microsoft Windows and geared towards the pro-graphics designer, needs a 286 or 386 for effective use. Documents can be up to 128 pages, text can be flowed around graphics very easily and the package includes colour support. Perhaps most useful, parts of pages can be worked on separately and then combined when completed.

- ▲ Allows simultaneous control of different page components
- ▲ Easy to use with its pop-up menus

- ▼ A little slow even on fast PCs
- ▼ Price

Value for money ★★★

● FINESSE 2

Logi UK 0925 413501
£171

Once known as AMS, this GEM-based package works with frames, but treats input or imported text and graphics separately and colour codes them. Documents may be up to 16 pages, and masters and paragraph styles can be pre-recorded for fast layout.

- ▲ Flexible with many useful features
- ▲ Good manual with excellent tips on design

- ▼ Limited typefaces

Value for money ★★★★

● JETSETTER 4

Garbo Systems 0736 67166
£399

A wide variety of fonts and text sizes up to 750 point make Jetsetter unique. Separate menu driven screens for graphics and text allow good control of graphics but limited text editing functions. However graphics are bitmapped and can't be resized larger than the original.

- ▲ Excellent with a laser printer
- ▲ Versatile graphics handling

- ▼ Difficult text editing

Value for money ***

● TIMEWORKS DTP

GST/Timeworks 0954 81991
£129

ALSO AVAILABLE FOR ATARI ST

One of the first medium priced DTP packages, GEM based and compatible with the wide range of Bitstream Fontware. A frame based system incorporating master templates, paragraph styles, page guides and automatic text wrap-around graphics. Timeworks also includes a good range of drawing facilities and ■ able to handle documents up to 999 pages.

- ▲ Excellent DTP at budget price
- ▲ Imports wide range of text and pictures

Value for money ★★★★★

● FLEET STREET EDITOR

Mirrorsoft 01 928 1454
£184

ALSO AVAILABLE FOR ATARI ST, AMSTRAD PCW, AMSTRAD CPC, BBC

A GEM style package, Bitstream font compatible, but generally slower to use than real GEM DTPs. Both text and Graphics can be manipulated on the same screen and overlap each other. A wide selection of clip art is supplied but the working document has to be reloaded before insertion.

- ▲ Good clip art selection
- ▲ Wide file format supported

- ▼ No automatic reflowing of text
- ▼ Relatively slow and unfriendly

Value for money ★★

● GEM DESKTOP PUBLISHER 2

Digital Research 0635 35304
£397

You might expect something special from GEM's authors but what you get is a package which is very memory intensive although offering the usual page layout, paragraph tags and frame-based text formatting. On the plus side, it does include good text and graphics import and the rare ability on PCs to alter spacing between words.

- ▲ Inexpensive frame formatting
- ▲ Flexible text handling

- ▼ Slow

Value for money ★★

AMIGA DTP

● PUBLISHER'S CHOICE

HB Marketing 0895 444433
£99.95

Coming complete with the Kindwords word processor, the PageSetter text and graphics editor, a disk of headline fonts and the LaserScript utility that configures your documents as Postscript compatible, this really is a choice product. Working on the frame and grid principle, PC provides separate text, graphics and layout screens with the useful addition of full feature pasting facility.

- ▲ An easy to use comprehensive and powerful package
- ▲ Includes spell checker and thesaurus

- ▼ Slight lack of integration between component parts

Value for money ★★★★★

● PROFESSIONAL PAGE

HB Marketing 0895 444433
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3 1/2" DS/DD	135TPI	£8.50	£16.50	£23.95	£31.25	£37.95	£74.95

	QUANTITY	25	50	100	250	500
5 1/4" DS/DD	48TPI	£7.25	£13.95	£26.95	£64.95	£124.95
5 1/4" DS/QD	96TPI	£7.95	£15.50	£29.95	£77.50	£139.95

All 3 1/2" Disks come complete with labels. All 5 1/4" Disks supplied with Write
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100 x 3 1/2"	Hinged Lid Lockable	£7.50

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re-pasted at will and at ease. Supporting
text flow, zooms, handy drawing utilities
and high-resolution bitmapped graphics.
PP also offers colour separation control
at an amazingly low-price. There's a
page review mode and Postscript print-
ing is also catered for

- ▲ Excellent value for money
- ▲ Perfect for high-resolution pages and
colour separation

▼ Needs two drives or a hard disk

Value for money *****

● PAGESSTREAM

Silica Systems 01 309 1111
£171.35

A frame based package, which also
uniquely allows you to rotate text and
graphics material in three dimensions.
Aside from the usual DTP features, page
view, variable zooms, automatic text
wraps, and a range of text styles make
the product very comprehensive.

- ▲ A wide range of flexible control
- ▲ Unique 3D text and graphics handling

▼ Limited colour separation

Value for money *****

● CITY DESK

Precision Software 01 330 7166
£157

A different approach offers the user a
column-based formatting package in
which imported text can be shunted
around the page as if it were a graphic
object but font, sizing and style
attributes are messy. A rather simplistic
graphic editor does it business ade-
quately enough but despite some power,
CD suffers from the lack of a GEM type
interface.

- ▲ A powerful low-cost package
- ▲ PostScript supported

▼ Formatting commands entered as code
▼ Terrible manual complements a difficult
interface

Value for money ***

● SHAKESPEARE

Cloudhall 0604 231 2111
£99

The only budget DTP package that
allows colour on the page to be carried
through hard copy also supports
mono Postscript output and is frame-
based. However there's no zoom facility
and font, style and size attributes are lost
when text is reflowed. IFF colour graph-
ics can be imported but not HAM, how-
ever 32 colours can be displayed on
screen and palettes changed accord-
ingly.

- ▲ Ideal for colour printer owners
- ▲ Accurate text positioning

▼ No format data can be imported with text
▼ No drawing tools included

Value for money ***

ST DTP

● PUBLISHING
PARTNER

Clik ST 0753 682 988
£159.99

Excellent GEM-based pagemaker sys-
tem, with multiple-on screen pages,
impressive range of fonts and text sizes
and facility to import different ST graph-
ics formats. Also includes a range of
drawing tools and variable magnification.
Fast screen updates and high quality
printer output

- ▲ Comprehensive and fast
- ▲ Excellent value

Value for money *****

● SIGNUM 2

Signa 0252 874406
£184

Billed as a document processor, Signum
allows text to be placed and adjusted to
accuracies of upto 1/90th of an inch as
well as imported graphics and technical
fonts and symbols. Dot-matrix and laser
printers are supported.

- ▲ fast screen updates and response
- ▲ compatible with Signa's scanners, digitisers
and Mac emulators

▼ price

Value for money ***

Also available

● FLEET ST £115

● TIMEWORKS £99.95
see PC guide above for comments

ARCHIMEDES

● IMPRESSION

Computer Concepts 0442 63933
£171

Designed specifically for RISCOS,
Impression multitasks with other applica-
tions and supports data transfer between
them. Capable of handling complex mag-
azine layouts it comes with an outline
font manager and typesetting quality
print-outs.

- ▲ Ease of import and editing
- ▲ Super-fast screen handling

Value for money *****

● ACORN DTP

Acorn 0223 245200
£149

Similar to the original Pagemaker for the
BBC B, Acorn's own package is based
around frames into which a wide range
of text styles, sizes and fonts can be
combined with a range of imported
graphics to produce high-quality printed
output

- ▲ Demands a knowledge of DTP
- ▲ Fast screen handling

Value for money ***

AMSTRAD PCW

● STOP PRESS

Database 0625 878888
£89.99

A well-designed desk top publisher which
doubles up as a graphics package.
Besides being able to display data as
graphs, pie charts etc, and manipulate

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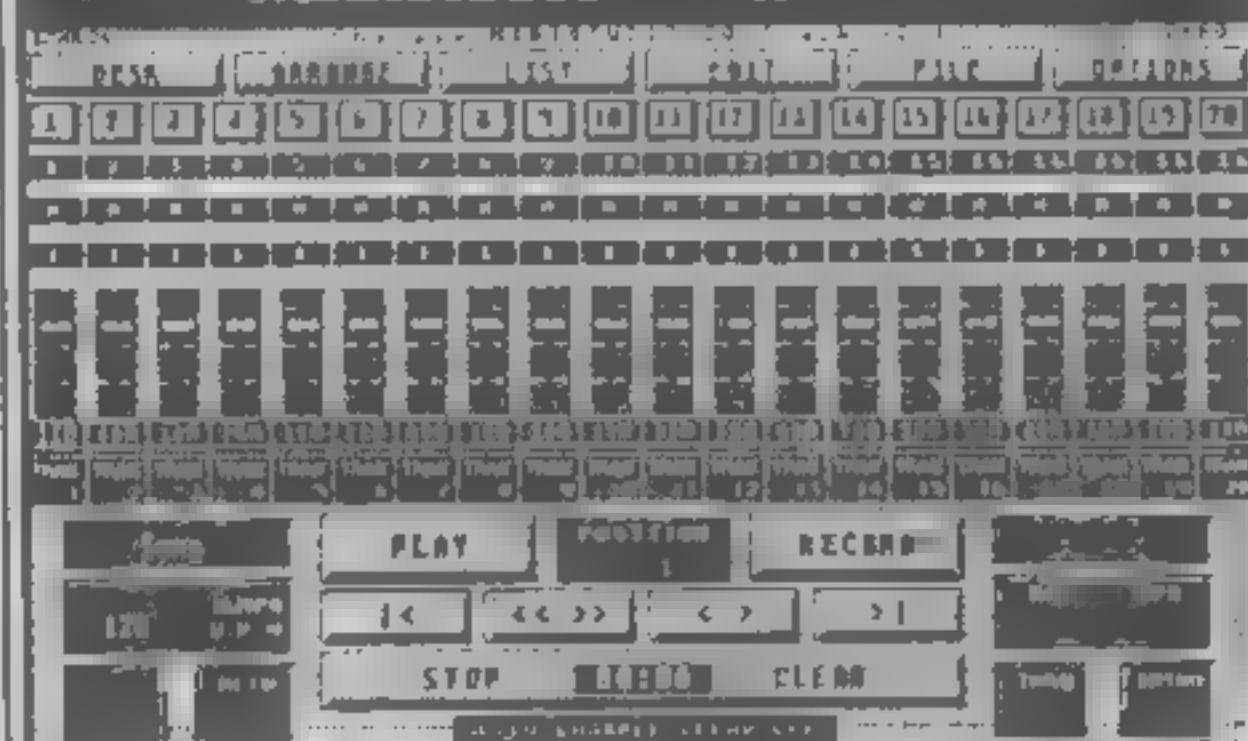


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Midistudio £99.99



"will give Steinberg's Pro 24 a run for its money"
ST WORLD March 89

Midistudio is an attractively priced 20 track MIDI Sequencing package. It can record up to 682 bars per phrase (pattern) on up to 100 phrases. Any phrase can be placed on any track. Tracks can be soloed and muted and tracks and phrases can be named. Program numbers can be displayed in a variety of ways including 0-127, 1-128, in banks from all-b88 or a01-b64. The desk features sliders to set relative volumes on each track and you can even do a mix on the fly. Midistudio also has a clock to display the length of the last playback. Midistudio has step time note edit functions including copy, split, merge, append, and transpose, velocity editing (including a humanize function), full controller editing, quantizing and a buffer which will store a copy of a phrase for recall after destructive editing. Demo disk £3.99

Software

At Least 20% discount off all 16 bit games software.

Minimum Discount

E.G.	RRP	Our Price
	£19.99	£15.99
	£24.99	£19.99
	£29.99	£23.99

Maximum Discount

	£19.99	£6.99
	£24.99	£9.99

Send SAE for full software catalogue.

Educational software Add with Oscar £7.99. Spell with Oscar £7.99, AB Animator £5.99 and Trilogi £5.99 still available also data disks for Spell with Oscar £4.99.

Phone for best prices

Free delivery (Mainland UK only) on orders over £40, for orders under £40 add £2.50.

A4 Flat bed Scanner £499.99

A4 Flat bed scanner scans at 200dpi and includes a thermal printer. Can be used as photocopier (ST & Amiga).

Limited offer ex-demo £399.99



SCAN AT UP TO 1000 DPI FOR ONLY £69.99

Demonstration disk (low res) £3.99 (£2.00 redeemable)

The Image Scanner can provide high quality graphics digitising for a tenth of the cost of other digitisers. This simple unit plugs into the cartridge port of the ST and accepts scanned information via optical cables which fix easily to the head of any printer. Scanned images can be saved in raw data, Degas, Neochrome and IMG formats, ideal for DTP applications. The Software supports scanning resolutions of 75,150,216,300,360 and 1000 dots per inch horizontally. An example disk is available which contains a slide show of low resolution images scanned with this product. The cost of this disk is £3.99, £2.00 of which is redeemable on purchase of a scanner.

New Low Price Printers

Star LC 10	£ 169.99
Star LC 10 Colour	£ 219.99
Star LC 24/10	£ 259.99
Epson LQ500	£ 319.99
Citizen 120D	£ 139.99
SLM 804 Laser	£1099.99

See Star Professional series printers.
Phone for others. All printers come complete with Parallel cable.

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Megafile 30 (ST)	£474.99
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(Amiga)	£659.99

Ladbroke Computing 20Mb drive (ST) £349.99

Disk drives

Cumana 1Mg Drive (ST)	£89.99
Cumana internal 1Mg Drive (ST)	
(kit or fitted)	£74.99

Please note ST's case needs cutting for above internal drives.
Amiga 1 Mg Drive, disable switch & through port £79.99
A/B boot switch (fitted XST) £24.99

Professional Printers

Star Laser printer 1 Megabyte RAM as standard upgradeable to 2 Mb. 8 resident fonts, HP, IBM, Diablo, Epson emulation, 8 pages per minute, 300 dpi. £1599.99
Star FR-10 9 pin £ 399.99
Star FR-15 15" 9 pin £ 514.99
Star XB-24/10 24 pin £514.99 colour £554.99
Star XB-24/15 15" 24 pin £699.99 colour £639.99
These Star printers have 12 months on site warranty (UK Mainland)

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SM 124 Monochrome Monitor.	£ 99.99
SC 124 Colour Monitor.	£269.99
Phillips 8833 Colour Monitor.	£249.99
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Phillips 14" Remote, Start input, Fastest Tv with 40 tuner presets.	£234.99

All monitors come with start to ST/Amiga.

Peripherals & Dust Covers

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	A3 £818	Disk Drives	£2.99
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Tracker ball (ST/Amiga)	£24.99	Printers	£7.99
80 / 100 disk box	£9.99	Others	phone

Phone for prices on all SIGMA products such as Colibri hand scanner with or without OCR, Signum 2, Augur OCR.

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STFM Blitter chip upgrade (kit)	£ 39.99	STFM Blitter chip upgrade (fitted)	£ 49.99
512 K RAM Extension board (Amiga)	£ 19.99	RAM Extension populated (Amiga)	£ 89.99
RAM Extension board+clock (Amiga)	£ 29.99	RAM Extension+clock populated (Amiga)	£ 99.99

* Please check machine configuration before ordering. Fitting prices quoted for machines not previously tampered with. Due to the complexity of the installation we must install and upgrade the ST board for you. All upgrades and repairs carry our 3 months parts and labour guarantee.

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100	£79.99	£82.99	£40	£45
Sony Branded				
10		£10.99		
100		£99		

Phone for different capacity disk boxes and disk care kits.

** New Low Prices **

Computer Systems and Packs

** New Low Prices **

520 STFM Explorer Pack £269.99
Includes Atari 520 STFM with 1/2 Mg Memory, 1 Mg drive and mouse. Includes tutorial disk.

520 STFM Power Pack £359.99
Includes Atari 520 STFM with 1/2 Mg Memory, 1 Mg drive, mouse, joystick and software pack consisting of organiser software First BASIC, First Music and a selection of 20 top quality games.

1040 STFM £449.99
Includes Atari 1040 STFM with 1 Mg Memory, 1 Mg drive, mouse and Business pack which consists of Microsoft Write, Super base personal, VIP Professional and Melcomco Basic.

1040 STFM Power Pack £479.99
Includes Atari 520 STFM with upgraded 1 Mg Memory, drive and mouse with software pack. This pack is equivalent to a 1040 STFM with Power Pack software.

Amiga A500 Pack New Price £349.99
Includes best selling Amiga A500 computer with 1/2 Mg memory 1 Mg drive, mouse, Tenstar pack, Photos pain and Modulator.

Atari Mega ST 1+Mono Mon £599.99
The new Mega ST 1 includes separate keyboard and cpu, Blitter chip, clock, 1 MB RAM, mouse and a business software pack including database, word processor, spreadsheet and BASIC software.

Atari Mega ST 2+Mono Mon £899.99
The Mega ST 2 includes separate keyboard and cpu, Blitter chip, 2 MB RAM and mouse. The Mega ST 2 also includes a battery backed clock and business software.

Atari Mega ST 4+Mono Mon £1199.99
The Mega ST 4 includes separate keyboard and cpu, Blitter chip, 4 MB RAM and mouse. The Mega ST 4 also includes a battery backed clock and business software.

DTP Packs £phone
This pack consists of Mega 2i or 4, external 3.5" drive / or 30 Mb hard drive, SLM804 Laser printer, Mono monitor, software, 90 days on site maintenance.

Atari Portfolio (pocket pc) £249.99
This amazing hand held computer is fully MS-DOS compatible and has built in software including address book, text editor, diary and a Lotus 123 file compatible spreadsheet. 128K free RAM, 256k ROM

Atari PC 4 (80286) £1499
The PC 4 has an 80286 processor running at 8 or 12 MHz, 1 MB of RAM, 60 MB hard drive, 5 AT and 1 XT expansion slots. For Mono monitor add £100.

Atari PC 5 (80386) £2599
The PC 5 has an 80386 processor running at 16 MHz, math coprocessor socket, 64K cache memory, 2 MB RAM, 60 MB hard disk with high performance controller, 4 AT and 1 XT slots. For Mono monitor add £100.



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draw objects, there's also a zoom feature, image superimposition and a clip art library. You can print up to 108 pages in one go, choose from 14 different fonts and use up to 96 point type size.

- ▲ Great graphics handling
- ▲ Accurate positioning and layout
- ▼ Poor facility to undo mistakes.

Value for money ★★★★★

AMSTRAD CPC

● STOP PRESS

Database 0625 878888
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The DTP package for the CPC. Stop Press allows you to produce text of any size with a wide range of fonts and run it around illustrations you've drawn and edited. You can make fine adjustments, add patterned borders, create boxes, add shaded backgrounds and even fill circles with text.

- ▲ An impressive and comprehensive all-rounder
- ▲ Fantastic text and graphics handling

▼ You need a mouse

Value for money ★★★★★

COMMODORE 64

● STOP PRESS

see notes above

BBC

● WAPPING EDITOR

Watford Electronics 0923 37774
£69

Coming on a 64K ROM, this package has a sophisticated graphics module, pro-typesetting software, a word processor, font editor and a variety of printer dumps. It's mouse control allows you to create pages from A6 to A3, and print upto 150 characters across a A4 page. Multiple columns and pages are also supported.

- ▲ Very user friendly
- ▲ Extremely comprehensive range of features

Value for money ★★★★★

PC GRAPHICS

● PC PAINTBRUSH

Microsoft 0734 500741
£145

Bitmapped painting package which offers a reasonable range of tools and functions to build impressive graphical displays. This program allows you to perform everything from simple sketches to complex and colourful designs.

- ▲ Microsoft is synonymous with quality
- ▲ Moderately easy to use

▼ Not cheap

Value for money ★★★

● DELUXE PAINT II

Electronic Arts 075346465
£99.95

Comprehensive painting program also available for other machines which features functions such as dithering, lots of fills, stencils, in fact everything necessary for the budding silicon artist.

- ▲ Comprehensive and fully featured
- ▲ Gets the most from the limited PC display

Value for money ★★★★★

● CORELDRAW!

CTRL ALT DELI 0908 662759

Advanced paint program with many functions including full traced bit-mapped graphics, lots of colours and fills and an easy to learn user interface. If you have a yen to tinker with paint and design but don't want to learn complex command sequences this is for you.

- ▲ Easy to learn and use
- ▲ Bit mapped graphics

Value for money ★★★

● VP GRAPHICS PLUS

Paperback Software 0245 265017
£ 99.95

Not a paint package as such but rather a program which allows you the user to produce graphs and charts depicting a variety of information. You can draw histograms, pie charts, line graphs in fact everything necessary for business graphics display.

- ▲ Full range of charts available
- ▲ Easy to use

▼ Not for artists

Value for money ★★★

AMIGA GRAPHICS

● DELUXE PAINT III

Electronic Arts 0753 46465
£79.95

The painting package for the Commodore Amiga. All possible functions including dithering, patterned fills, stencils, use of perspective, rotate and scaling effects as well as wrap fills, shadow painting using EHB and last but not least incredible animation making full use of available tools. The Amiga is the first choice for painting and animation, exploit its capabilities to the full with Deluxe Paint III.

- ▲ All possible painting functions available
- ▲ Powerful animation

▼ A little daunting perhaps for novice artists

Value for money ★★★★★

● PHOTON PAINT 2

Microillusions 0480 49497
£79.95

This is the package for the novice. A very easy to use painting program that is both powerful yet simple to learn and exploit. There's full use of HAM modes, airbrush, texture mapping, variable blend control and animation. Recommended.

▲ Easy to use

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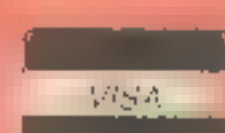
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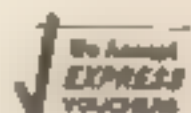
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Value for money ****

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▲ Structured approach simplifies operations
▲ Reasonably priced for professional quality CAD

▼ Requires a little draughting knowledge to get the most from the program

Value for money ***

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The original and still one of the best. Fully-featured HAM painting package with sexy functions such as 4096 colours on-screen and lots of special effects including shading, blending and tinting. What's more this latest version also features text, overscan and texture mapping and is almost twenty pounds cheaper than earlier versions.

▲ Plenty of features for the money
▲ Special effects tools

▼ Not the most comprehensive paint package

Value for money ****

ATARI ST GRAPHICS

CYBER PAINT

Electric Distribution 0480 496666
£69.95

Breath-taking bitmapped animation and graphics package from American magazine/software publisher Antic. This program features some incredible effects including tweening (changing one object to another a line at a time) and very powerful animation functions. Rivals the Amiga and is highly recommended.

▲ Very powerful animation
▲ Stunning effects
▲ Cheap

Value for money *****

DEGAS ELITE

Electronic Arts 0753 46546
£24.95

Like Digipaint for the Amiga, Degas Elite was one of the very first painting programs available for the Atari and it's still one of the best. You can have up to 8 word screens at once cut and paste between any of them and there's plenty of useful and powerful functions such as zoom, block handling etc.

▲ 8 screens available
▲ Powerful block handling

▼ Lacking in features when compared to latest offerings

Value for money ***

SPECTRUM 512

Electric Distribution 0480 496666
£79.95

Painting package featuring (as its name suggests) 512 colours. The program is simple to use and effective. There's some very powerful functions too in the form of anti aliasing and gradient fill.

▲ Lots of colours
▲ Easy to use

▼ A little expensive

Value for money **

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▲ Lots of fills
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Value for money ****

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Minerva Software 0392 437756
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▲ Powerful and comprehensive
▲ Easy to use

▼ A little expensive for the home user

Value for money ***

PRO ARTISAN

Clares Micro Supplies 0606 48511

Professional release of the evergreen Artisan paint program. This package features 256 colours and 15 different modes of operation. The program has a WIMP user interface, help screens and hard disk support.

▲ WIMP environment simplifies operation
▲ Lots of help screens

▼ Requires at least 1Mb of memory

Value for money ****

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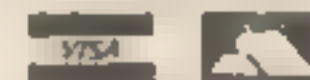
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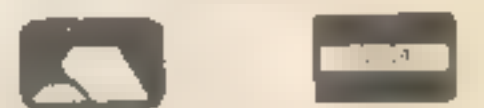


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Very similar to the Spectrum and Commodore 64 versions this popular painting package produces pixel appointed perfection and performs well!

- ▲ All the features necessary for pretty pictures
- ▲ Reasonably priced

Value for money ****

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Melbourne House 01 727 807

Painting program from well-known software house Melbourne House. Cheap and cheerful, this package features points, lines, circles, ellipses, 27 colours and detailed pixel by pixel design. Easy to use and reasonably priced.

- ▲ Simple user interface
- ▲ Lots of features

Value for money ***

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● ADVANCED ART STUDIO

Rainbird 0606 504326
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Superior painting program for Spectrums equipped with 128K or above. Plenty of fills, colours and features such as zooming, windows and text handling. Reasonably priced and featured.

- ▲ Plenty of tools, colours and fills
- ▲ Easy to use

Value for money ****

COMMODORE 64 GRAPHICS

● ADVANCED ART STUDIO

Rainbird 0606 504326
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Very similar to the Spectrum version but works with the basic Commodore 64 as well as the larger RAM memory machines. Fine range of features for a reasonable price.

- ▲ Full featured
- ▲ Plenty of colours
- ▲ Works with the 64K machines

Value for money ****

DIGITISERS

● VIDI

ROMBO PRODUCTIONS 0506 414631
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Grabs 16 shades of grey from videotape recorder or camera with software. the plug in card feature as a phono socket for the video signal input and controls for brightness and contrast, depending on the machine, the software allows real-time capture and display - on the Amiga it's four frames a second. If you have extra memory you can store images in RAM and play back animated sequences.

- ▲ Good low-cost performance
- ▲ Can control hardware from your own programs

▼ Performance dependent on host machine

Value for money *****

● THE DIGITISER

DATL 0782 744707
 FOR AMIGA £89.99
 FOR ST £79.99 (works in mono and colour)
 FOR COMMODORE £79.99

Plugging into a parallel port, the hardware frame grabs at 1/50th second and screen updates at 1 frame per second allowing the software to edit, cut and paste portions of the 16 grey scale picture along with special effects such as reversals and mirroring.

- ▲ Impressive features at the price
- ▲ Single, continuous or buffered display

Value for money *****

AMIGA

● DIGI VIEW GOLD

HB MARKETING 0895 444433
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This minute digitiser plugs into the parallel port and comes with an accompanying colour wheel which attaches to a video camera for colour grabbing individual RGB signals. Grey scale digitising is also supported and both results are extremely impressive. Saturation, brightness and sharpness can all be controlled.

- ▲ Very impressive in HAM mode
- ▲ Features overscan, extra half-brite and line art support

▼ Needs 1 Meg
 ▼ Lengthy scan times

Value for money ****

● VIDEON

Power Computing
 £250

Good quality digitising on a par with Digiview from neat hardware with an integral colour splitter. Software allows image enhancement, zooms, pixelisation and ability to transfer images onto surface of objects generated in art packages. Images of up to 4096 colours can be captured and multiple images shown on screen simultaneously.

- ▲ Good quality digitisation
- ▲ Can digitise 4096 colours



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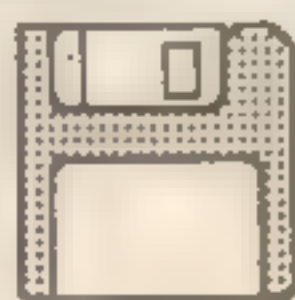
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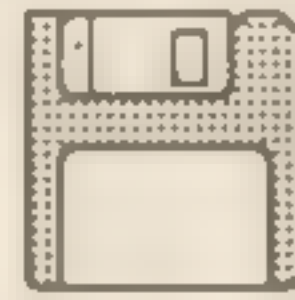
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- ▲ Supports up to 32 colours

▼ Low-res only

Value for money ***

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Camera, video recorder or TV pictures can be digitised via the plug-card as colour or grey scale images which can be treated for brightness and contrast. Images can be saved to disc as Neochrome, Degas or Artdirector format files for subsequent manipulation. Only high-res pictures can be saved for DTP use.

- ▲ Good range of control for the price
- ▲ Excellent results in hi-res mode

- ▼ Slow scan time
- ▼ Animation only possible in lo-res

Value for money ****

● **SAM DIGITISER**

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An excellent real-time frame grabber for capturing images in 16 colour lo-res format. Entire sequences can be saved - 10 on a 520, 24 on a1040, 52 on a Mega ST2 - and animations run at variable speed in forward or reverse.

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it provides a fast and flexible means of digitising. video camera, recorder and off-air pictures can not only be captured but treated and manipulated in real-time to a range of effects.

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- ▲ Good level of sampling
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PCW

● **VIDEO DIGITISER**

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- ▲ Auto contrast control
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▼ Quality not as good as scanned photos

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Compatible with modes 0, 1, and 2, the Beeb can convert images from camera, videotape recorder or television for use in DTP and graphics packages. Up to 8 grey scales form pictures can be compressed, stored to disk and output to Epson compatible printer. on-screen, images can be treated as ■ normal graphic to the full range of paint manipulation.

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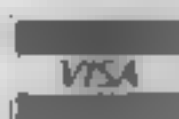
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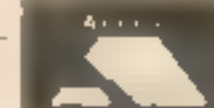
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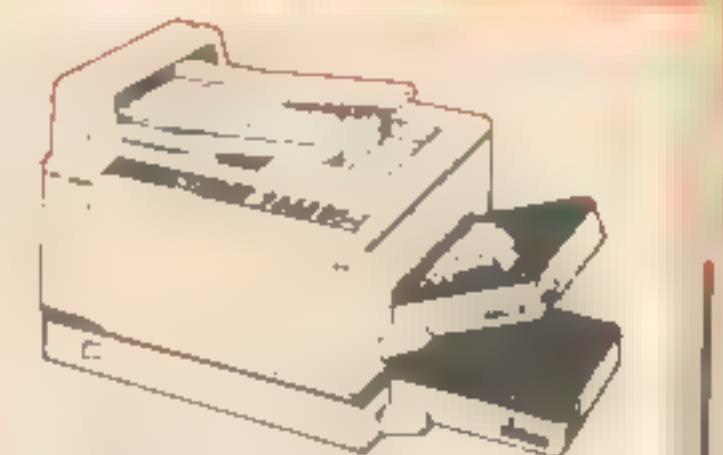
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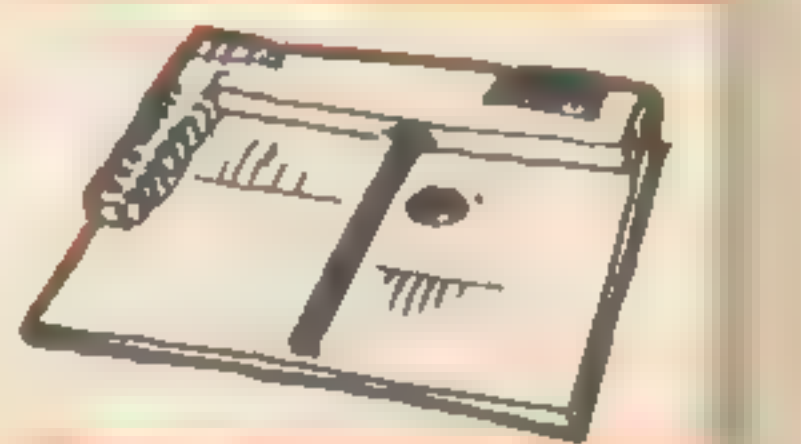


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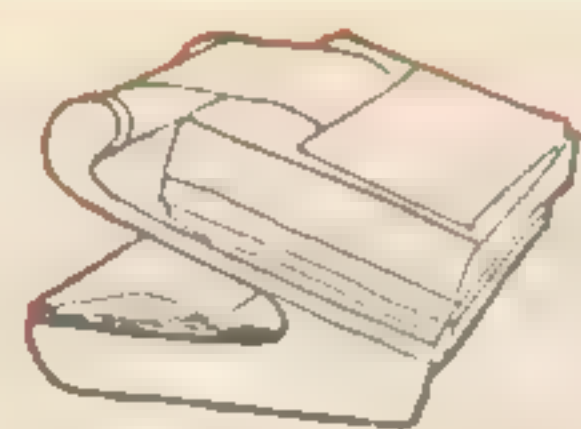
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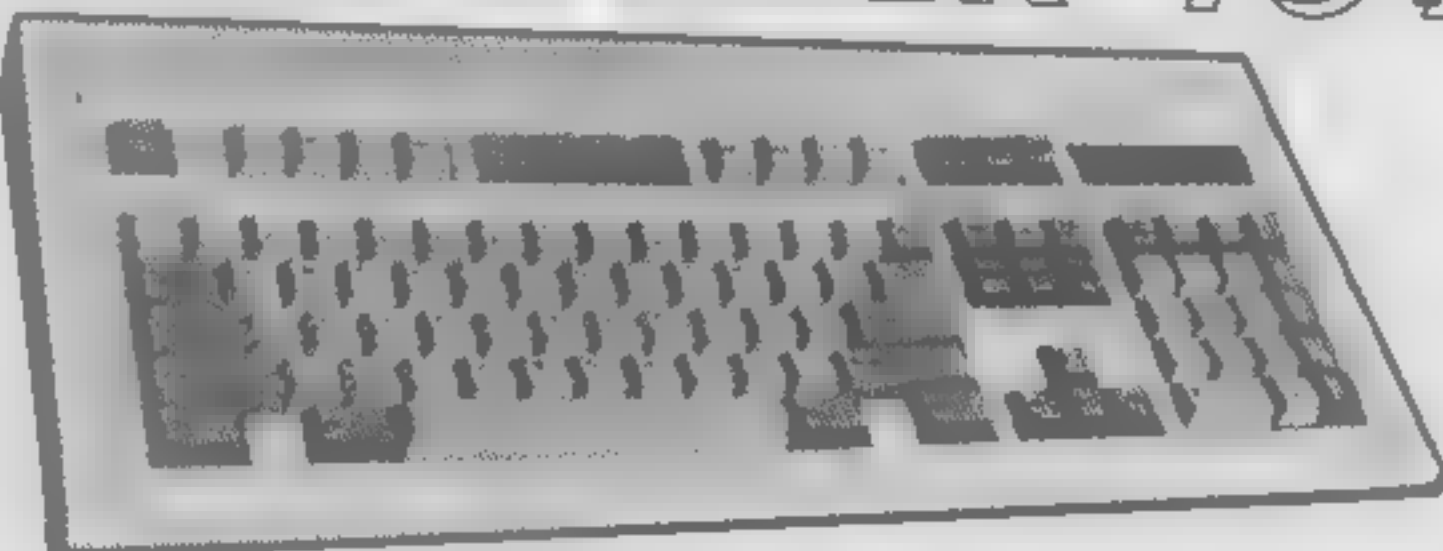
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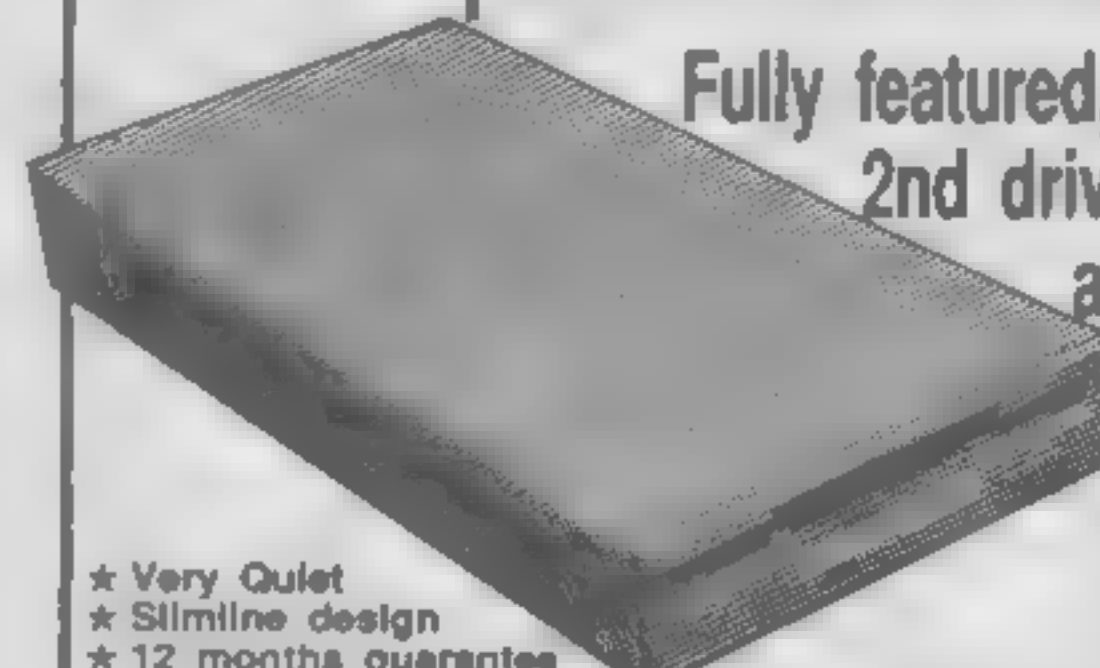
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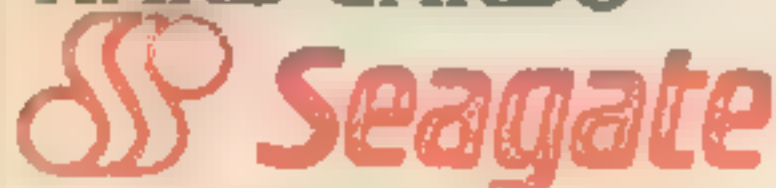
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WANTED Amiga contacts in Milton Keynes to swap demos. Contact Tim Morgan, 69 Alston Drive, Bradwell Abbey, Milton Keynes, Bucks, MK3 9HB. Hi ■ Faggy, The Wizard, Allan and Graham.

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ATARI ST assembly programmers needed to work for new demo team. Send example to: Andy Bowd, 8 Cleeve View Road, Cheltenham, Glos., or phone 0242 51197 after 6pm.

CAN anyone explain how to operate the speech prog on the Amiga. Also good Public Domain wanted. Jamie Bell, 29 Westonbirt Court, Ebley Close, St Georges Way, London SE15 6BH.

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ANY WP50 users MS-DOS. I would like some help, or DBase ■ Plus. George Rock, 447b Grove Green Road, London, E11 4AA, Tel: 01 539 5654.

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• HUMOUR

WHAT do you call 500 Amigas in a skip? A start. What's the difference between an Amiga and a trampoline? You take your boots off ■ jump on a trampoline.

SWAP my IBM system 3090 C/W 40 terminals for one with 38 terminals, because I don't know how ■ disconnect them. John Smith, 22 Acacia Road, Timbucto, Toyland.

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PERSON: Have you got a space bar for the A500? Shopkeeper: Throw in the monitor and printer, and I might consider it. (Bob T Mamba)



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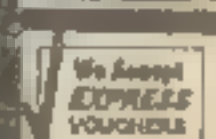
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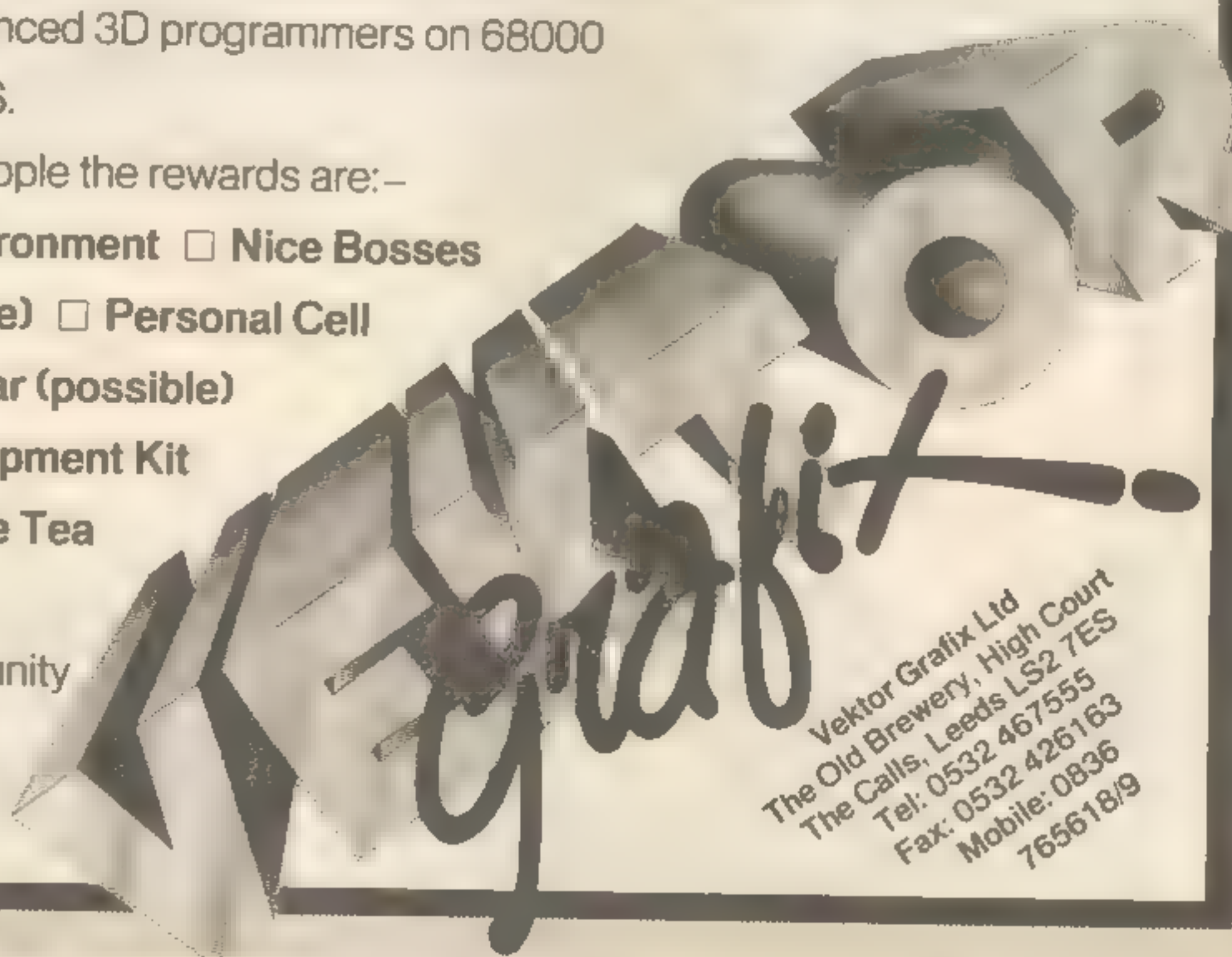
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- Any popular software package (serious or leisure).
- Any language.

If you're prepared to pass on that knowledge to other

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You may list either a phone number or an address. (Readers using the Helpline will be instructed not to call in anti-social hours and to enclose an SAE with any queries.)

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Spreadsheets are the poor cousins of the serious software family. Everyone uses a word processor, and many have a need for a card-index database, but spreadsheets are considered more daunting and less essential. Spreadsheets are basically giant programmable calculators which can greatly simplify routine calculations like accounts and personal finance.

The principle behind all spreadsheets is the same. The sheet itself consists of a grid containing cells. Each row and column of the grid is labelled, so individual cells can be identified by giving their numbers. Columns are usually given letters and rows numbers so cell C4 is three columns along and four rows down. Each of these cells can contain data. The data can be in one of three forms, text, numbers or formulae. Text can be used as labels, and the numbers are the basic data the spreadsheet uses for its calculations.

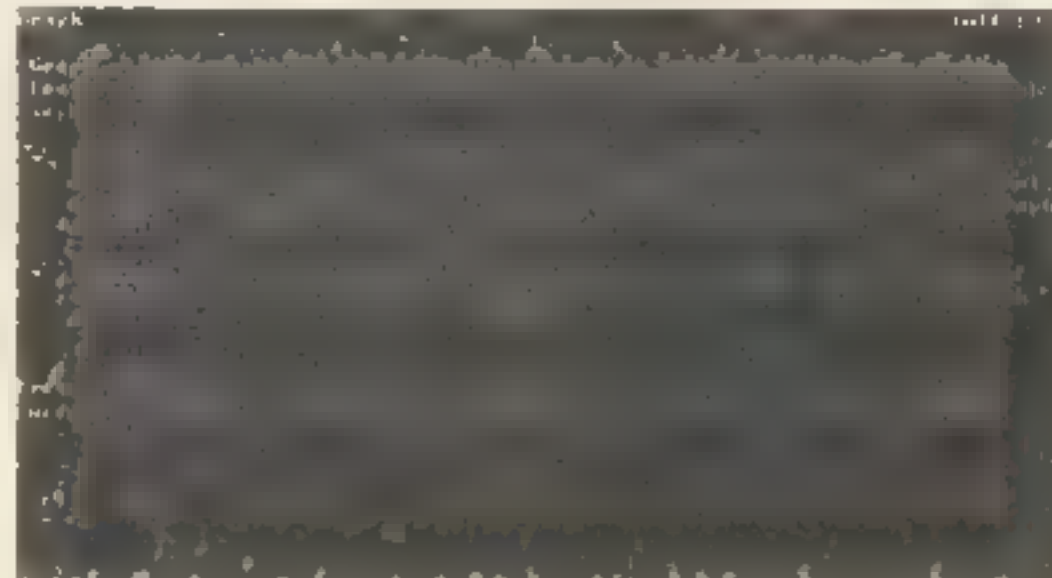
Formulae however are where the spreadsheet comes into its own. With a formula you can tell the spreadsheet to calculate the contents of the cell using the data from other cells – for example you could write a formula to sum the contents of all the cells in one column. Formulae can be very complex and use very sophisticated mathematical tools to analyse the data in the sheet.

Perfectly normal

PlanPerfect is the WordPerfect Corporation's spreadsheet and it has all the features you would expect from a quality product. As WordPerfect is one of the world's biggest selling word processors – in fact WordPerfect claims it is the biggest selling – it has made sure that users of the word processor automatically buy the spreadsheet. To this end the user interface in PlanPerfect is almost identical to that in WordPerfect and users of one can instantly transfer to the other without having to re-learn the entire set of commands. This is the approach which has made the Macintosh so successful – you only need to learn one program.

However there are more potential buyers out there than WordPerfect users, and if you are new

A spreadsheet can help with forward planning and financial management. Stuart Anderton looks at PlanPerfect, WordPerfect's capable offering



• Full on-line help makes the manual virtually redundant. Subjects can be called up by function or alphabetically

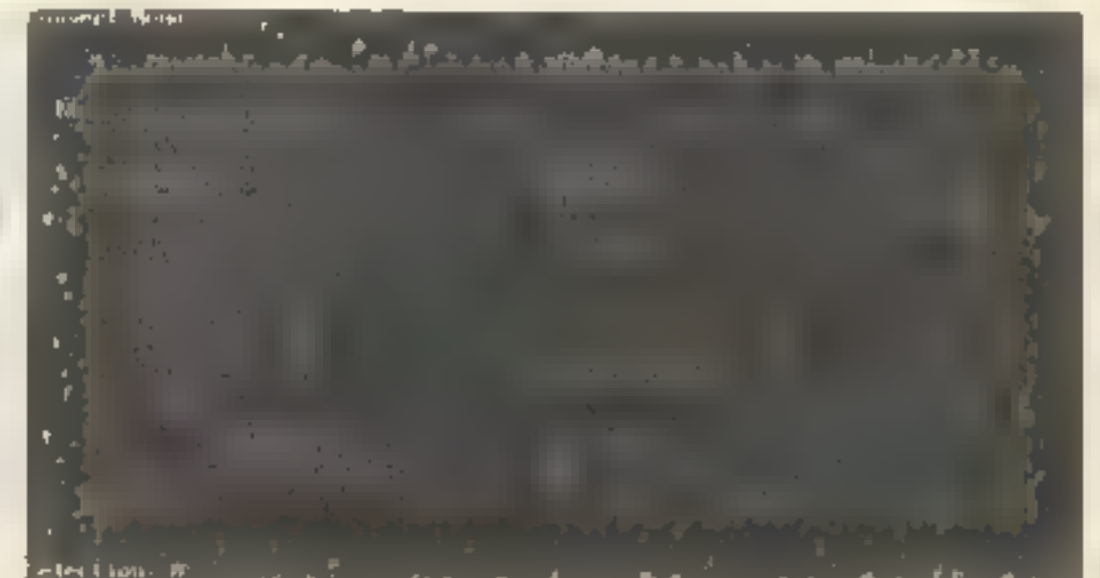
to the PC that program's system of using the function keys and numbered menus is not the easiest in the world to learn. To help these people PlanPerfect provides two alternative interfaces.

The first of these emulates the system used by the market-leading spreadsheet, Lotus 1 2 3. A menu appears at the bottom of the screen and you can access the commands by typing the first letter of their name. This method is a bit cumbersome and is only really included for converts from Lotus and its myriad of clones.

The other, more intuitive, interface uses drop down menus of the kind you see in GEM or Microsoft Windows. These are much clearer for the beginner, but are considerably slower than the other methods, especially as mouse control is not provided for. This choice of interfaces is a major plus – you can operate in way you want rather than the way the program insists, making using PlanPerfect much less stressful to learn.

Learning curve

Learning is the other area where PlanPerfect stands out. The hefty package of disks includes an interactive tutorial which explains spreadsheets from first principles and guides you through setting up a worksheet and some of the principle features of the program. Then the com-



• PlanPerfect can take data from Lotus 1 2 3 and dBase files, as well as ordinary text files

prehensive tutorial workbook takes over, and when you have completed that and looked at the range of example sheets included you should be well able to get started.

Another advantage for beginners in the comprehensive on-line help system which makes reaching for the manual a rarity. PlanPerfect then is a good spreadsheet for those starting out, and it appears robustly programmed and free from confusing error messages. Its price however will mean it's out of the range of most beginners.

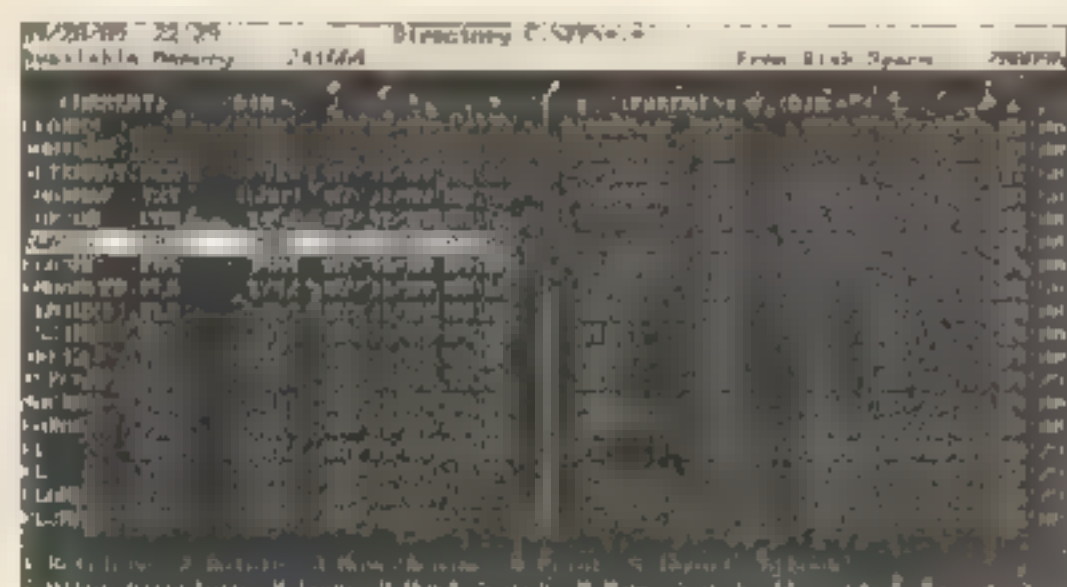
Linking up

Sheets on a disk can be linked to others and automatically extract data from them and update themselves – a very useful facility for a business as the accounting system could be set up to automatically use up-to-the-minute sales reports or whatever, without having to retype all the data each time.

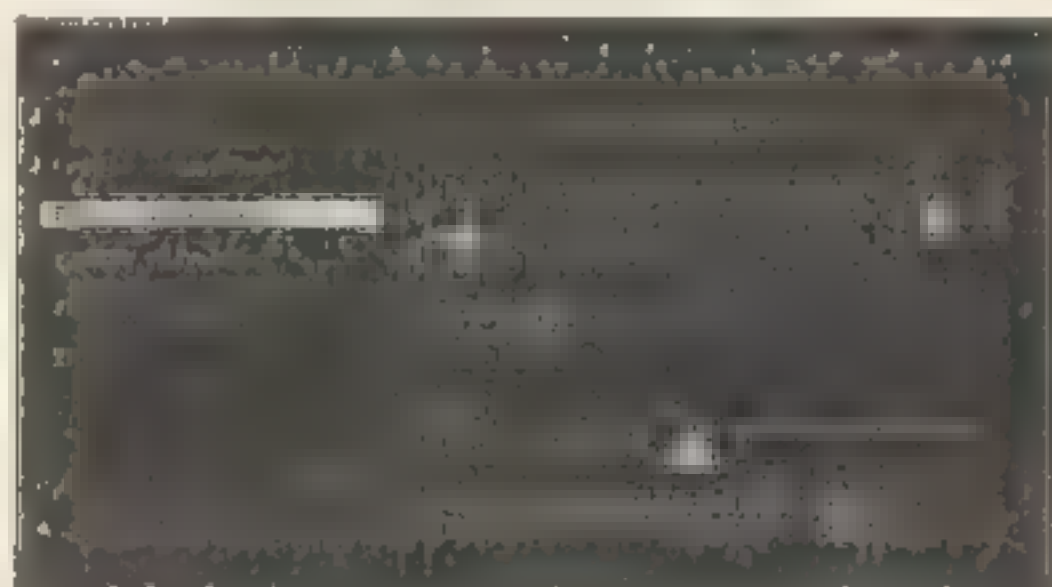
When the sheet has been completed you can produce simple graphs – pie, bar or line charts – and print them out on a huge variety of printers. Over 450 different drivers are provided for everything from PostScript printers to plotters and Epson dot-matrix machines. You can guarantee that PlanPerfect will operate with your printer, and a comprehensive range of formatting options allow very professional looking output.

Verdict

PlanPerfect is a fully featured spreadsheet which manages to be easy to use while not lacking in power. It seems fast in calculation, especially in its Optimal Recalc mode which minimises the number of changes needed. For anyone using WordPerfect as a word processor it has to be first choice, while its flexible interfaces, excellent tutorial and vast printer compatibility make it worthy of shortlisting in its own right. PlanPerfect doesn't have any gimmicky bells and whistles to make it stand out, but it does what it aims to do very well. ●



• Look familiar? PlanPerfect bears a strong resemblance to its word processor partner, this List Files screen is identical

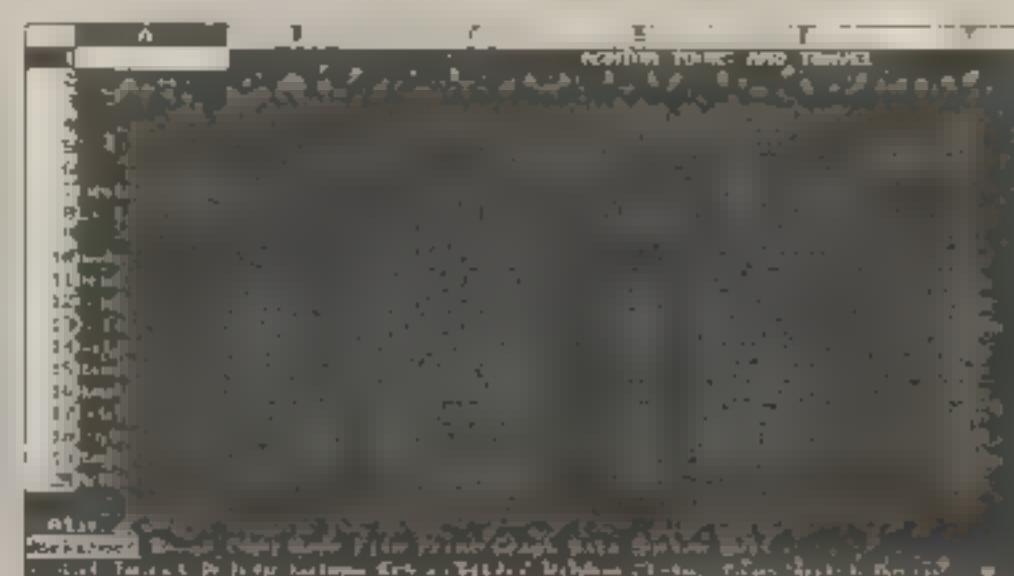


• The interactive tutorial guides you through the basics of using a spreadsheet

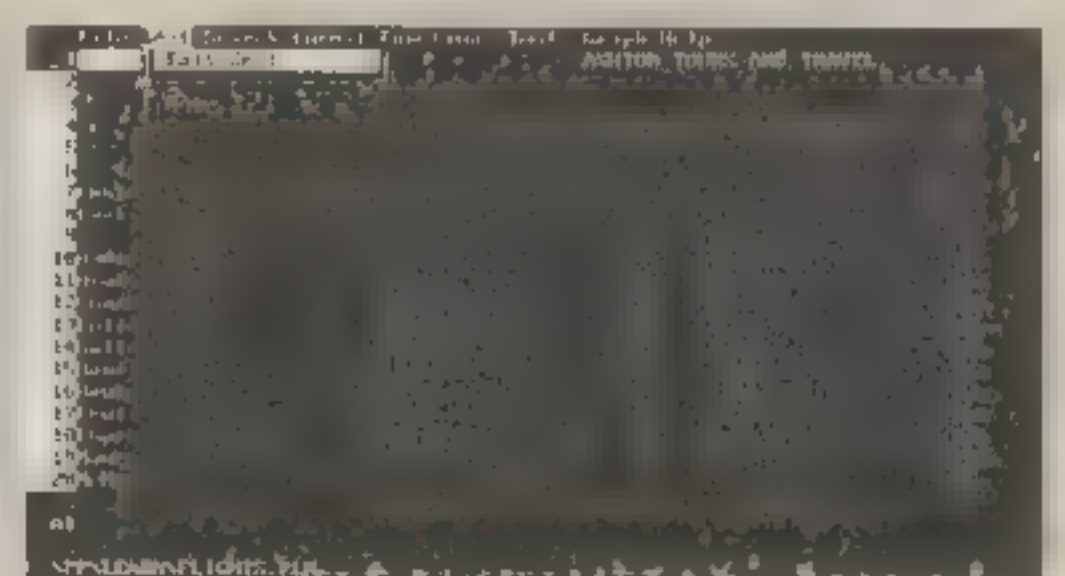
PAY YOUR MONEY, TAKE YOUR CHOICE



• You can use WordPerfect-style numbered menus...



...or pretend you're using Lotus 1 2 3...



...or opt for easier to learn drop-down menus

TECH TIPS



Personal computer problems? Express' Agony column has the answer. Write in strictest confidence to Uncle Techtip. The best tips win a freebie - so don't forget to tell us your address and machine

HELP! Rodent rop

I am thinking of buying an MSX NEOS mouse but I don't know if it works on the Toshiba HX-10. Can you help me?

Stephen Elford, Plymouth, Devon.

The HX-10 is an MSX machine, am I right? The NEOS mouse in question is intended to for use with MSX computers, huh? The point of the MSX standard is that software and peripherals will work with all machines, OK? What's your problem, get out there and buy one....

have upgraded to a +3 Spectrum but I find that the program is not compatible with the +3 Speccy. Mutation of lists occurs. Would there be anyone who can assist, or do I now have to purchase a +3 version of the program?

Alan Dreary, Brough, North Humberside.

Why don't you try calling the company responsible for Tasword, Tasman, on 0532 438301, and asking them for a cheap or free upgrade? Reputable software houses like to support existing customers - tell them Uncle Techtip said so.

HELP! Trash in trash out

I have a Tasword +2 program and

HELP! CPU upgrade

Please would you explain the advan

tages or otherwise of fitting the Amstrad PC1512 (twin floppy, mono) with a V30 processor.

Plenty of dealers sell them, but nobody seems to offer any information on what it actually does, or how it could affect the system in general. David Gunter, Plymouth, Devon.

Beats me. The V30 is a pin-compatible central processor intended to replace the 8086 and provide more speed. I know of no one who has carried out the upgrade and frankly find the whole subject rather tiresome. Forget it. Spend the money on a pretty game.

HELP! Menage a trois

I am a student studying micro-electronic engineering and have three queries I would like you to answer. The first is, I have a 3.5 inch disk drive that I whipped out of a Canon TX50II CP/M computer. At the rear of the drive there is a 34 and a 4 way edge connector, is it possible to connect this drive to my Commodore Amiga 500? secondly, do you know of any circuit board designers on either public domain or shareware? And finally is there such a thing as a single coloured ribbon for my Citizen 120-D, preferably red?

J. A. Dye, Harrogate, North Yorkshire.

A 3.5 inch drive in a CP/M computer? Jeez. Anyway, yes you can use the 3.5 inch drive with your Amiga. Try contacting Meadmore on 051 521 2202, the company should be able to supply you with leads to connect the drive to your machine. Circuit designers? Call George Thompson Services on 0770 82234. This company supplies a large range of PD software for the Commodore machines and should be able to help with a circuit designer. Citizen inform me that they only provide standard black ribbons for the 120-D machine.

QL solutions

Re the QL problems in Express issue 45. Centronics printer interfaces are currently manufactured by Miracle Systems LTD of York. Most QL dealers can supply the interface - retail price £29. The four Psion programs packaged with the QL (word processor, database manager, spreadsheet and graphics printer) are of varying 'user friendliness'. The word processor and graphics printer are easy to use with on-line help using the manual for reference only. To assist with understanding the intricacies of Archive (the database manager) we have produced a tutorial program

explaining all published and unpublished commands. The spreadsheet needs a little but not much, work to use properly. I suggest your correspondent (is committed? - Uncle Techtip) joins QUANTA (same thing - Unc), the QL User Group. For a small annual charge he will receive a monthly newsletter of 40 pages containing news, views, reviews and helpful information. In addition, the group organises regular regional workshops where committee members, software and hardware houses and QL-nuts are delighted to assist those attending. There are also many local sub groups meeting once or twice a month. The nearest sub(normal) group to High Wycombe meets at the Wheatsheaf Inn, East Hendred, Wantage, Oxon on the first Saturday of the month from 2.30pm.

The QUANTA membership secretary is Phil Borman, 15 Grosvenor Crescent, Grimsby, South Humberside DN32 0QJ (0472 49850).

John Silk, Birmingham.

HELP! Little Bo PPC

Can you help me with this one please? I am considering the purchase of an Amstrad PPC640, not as a laptop (as a paper-weight per chance? - Unc) because I'm only four feet wide, but as a desk machine plugged into the mains and a proper monochrome monitor most of the time, but which can still be transported if necessary to another place for data entry.

My reluctance is due to the fact that I do not like the grotty CGA style mono video display of the 1512/PPC series, with its black and white striped effect and I have checked in the PPC technical reference manual to confirm that it only supports MDA and CGA mono (and presumably colour) graphics modes, not Hercules. Is it therefore possible to connect a non-Amstrad mono monitor and set it up in MDA mode to give a readable text display?

John Smart, Hitchin, Herts.

You can plug any third-party mono monitor designed for use with PCs into the PPC and it will work fine. Alternatively, Vine Micros (0843 225714) will supply you with a television modulator which will allow you to connect the PPC to a colour television. This gives surprisingly good results - and colour too!

HELP! Drive dilemma!

I have an upgraded Atari 520STM with a non-Atari 3.5-inch drive. I have now bought a 5.25 inch disk

BUG OF THE MONTH

RODOS is supposed to be the greatest thing to hit the CPC since disk drives. Unless I am very much mistaken it has more bugs than a termite's nest.

1. The :ALIAS command does not work as indicated. Try as I might I can't get it to accept parameters properly. According to the manual, this should work:

:ALIAS, "BCAT", "4CAT 1"

to produce a CAT of the B drive using Arnor's Utopia command - it doesn't.

2. The :COPY command seems to do odd things to certain files, particularly binary files when saving them to a RODOS format disk.

3. The C drive will only format to RODOS format.

4. :4INFO, works in a wierd way.

5. :ROMS and :ZAP will not accept message

strings in the parameter list. If by chance a message is accepted it produces gibberish on the screen.

6. RODOS will not let me treat the 'sides' of my double sided drive as separate even though it's supposed to allow access to both sides independently.

7. I have problems with Protex. I have all of my correspondence on disk and have a file called Disk which is

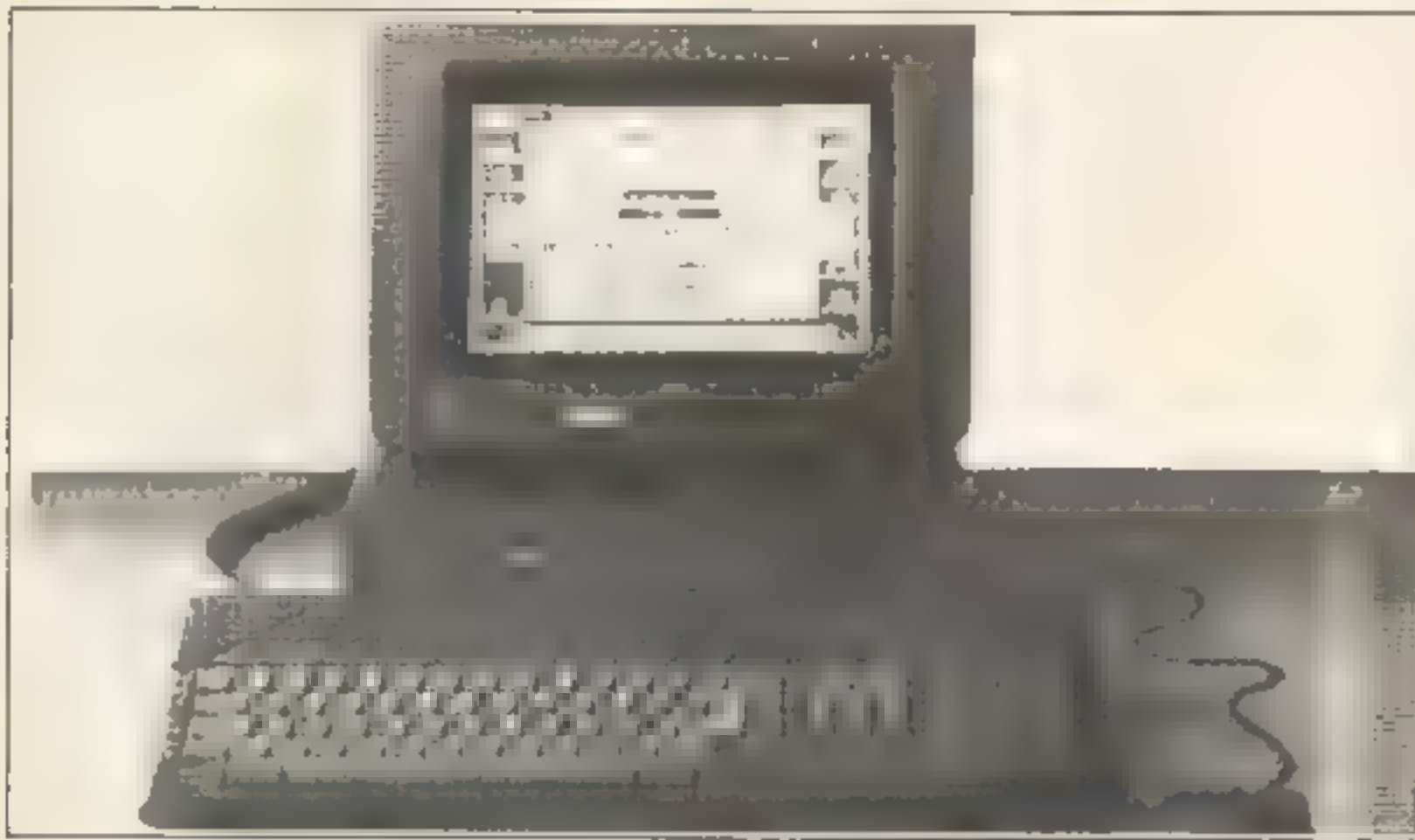
called by the autoboot of RODOS. This often fails.

Mike (life with the) Lyons, Tyldesley.

Phew! A bumper crop of bugs there kids. Congratulations Mike, you've just won for yourself a subscription to fabby mag Express. Any other potential 'buggers' out there? Send 'em in and win a sub....



• *Distributus reductus*: Knows away at unverified magazine circulations



drive but am unable to connect it at the present time. I was wondering if I could daisy chain the drives by coming from the STM into a PCB, then coming from the PCB into the two drives. Is this in fact possible? Also at the back of the drives are on/off switches. Is it possible to control these from the PCB instead of fiddling around the back of the drives. I am hoping that you can help me in this matter. Thanking you for your co-operation.

George Hendrie, Hatfield, Herts.

So, you have a 3.5 inch drive connected to your Atari STM and that drive has only one connector which is already being used (to connect it to the machine)? If your first drive had been an Atari device it would be equipped with a second connector which would allow you to attach a second drive. As it is, you're going to have to try and find someone who can supply you with a connection splitter in order that you can connect both drives at once. Although I have to say that I'm not sure this can be done. Try contacting Meadmore on 051 521 2202. The company manufacture a range of customised leads for computers and may be able to help.

Are you really so lazy that you can't be bothered enough to reach around the back of your drive to switch it on? Jeez, it's a wonder you can summon the energy to breathe....

HELP! No swops

I have recently purchased an NEC external drive for my Atari ST. I have a few two-disk games and the only one which uses both drives is *New Zealand Story*. I also have *Wierd*



Dreams but find the disk swapping annoying and spoils the game. Is there any way in which I can make this game and others work with both drives?

Martin Paley, Blackpool, Lancs.

A recurring moan and one which I'm afraid the software houses seem to ignore much to the chagrin of those who've recently emptied the coffers. You're going to have to continue swapping I'm afraid.

HELP! PC what?

After many years avoiding computers I've finally decided that it's about time I got a computer because I use one at work and am sick of not knowing what goes on outside the word processor I use.

I started looking around the high street shops in search of a PC compatible (I've been told that this is the computer to have) and in one well-known shop I was almost talked into buying the Olivetti PC1. It's a very strange looking computer but the salesman said that it was the ideal computer for the beginner. However, I decided it might be a good idea to seek some expert advice before spending my money. So could you please tell me if the Olivetti machine is a good buy? If not, what is a good cheap computer I should have? I would appreciate your help in this matter.

Ivy Cunliffe, Lindisfarne, Northumberland

A wise move seeking advice before parting with your hard-earned. High Street box shifters will sell you absolutely anything and care only for the contents of your purse.

Olivetti released its PC1 machine about a year ago to a very mixed reception from the press. A decidedly strange looking computer, difficult to expand and with a price tag that doesn't outweigh the disadvantages i.e. it's not cheap! The machine languished on the shelves of the high street stores and the punters spent their money wisely and avoided the computer. Several months ago there was talk of Olivetti abandoning the PC1

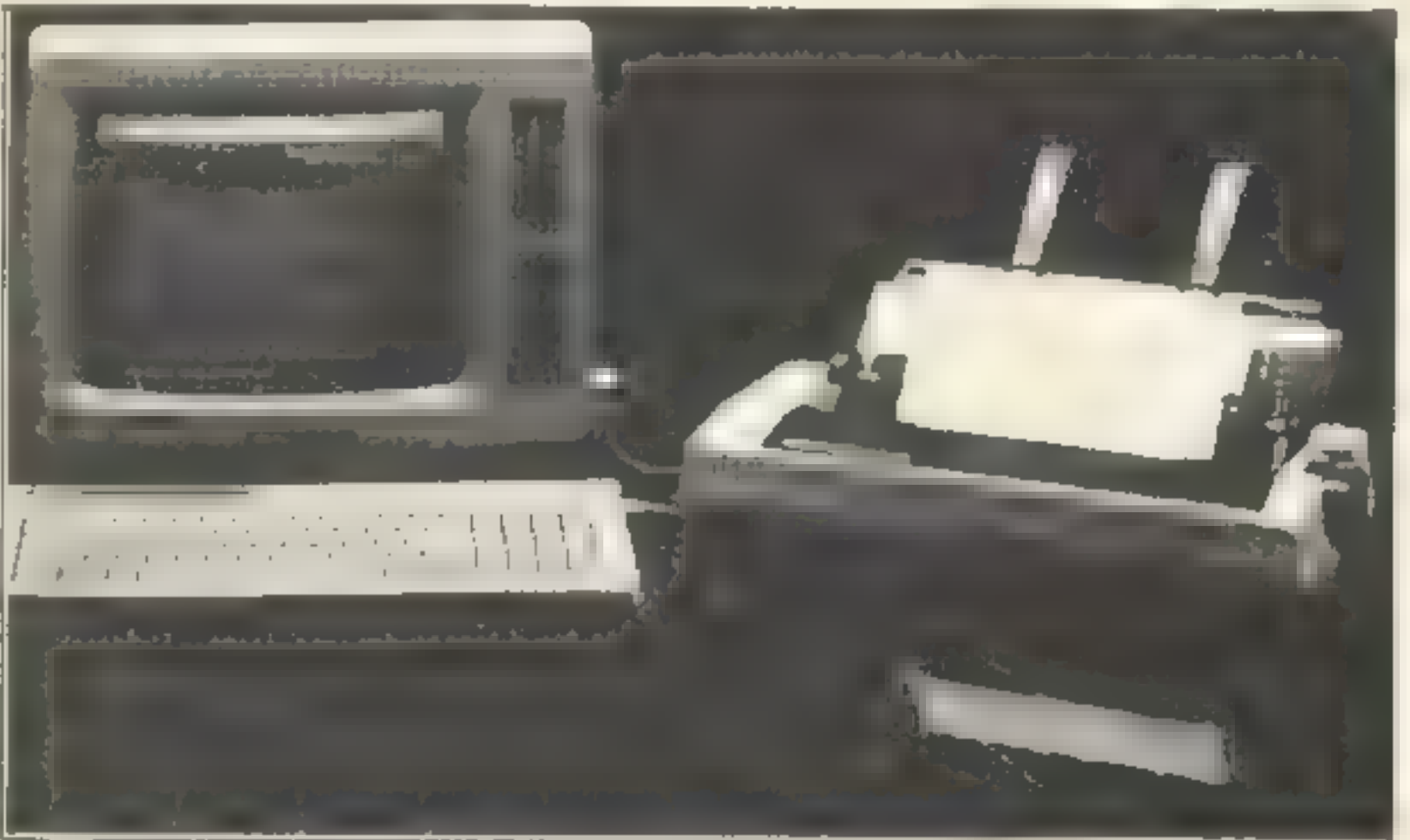
after poor sales. Rumours such as these do not inspire confidence in the machine.

I would not buy the Olivetti PC1. Rather an unequivocal statement but one which I stand by. There are lots of companies importing and selling good quality PC compatibles at a very reasonable price. One of the very best in terms of price/specification ratio at the moment is that from supplier Dolan Electronics (0267 84538). The Dolan XT costs £399 and for that you get a 8086-based computer running at 10MHz (original PCs ran at 4.77MHz, modern PC compatibles run at 8MHz). As a general rule the faster the MHz rating the faster the computer. Dolan's baby running at 10MHz is quick, there's lots of expansion slots, printer and serial ports and easy colour upgrade options. Highly recommended.

HELP! Null modem

This is the first time I have ever written to a computer magazine but I am desperate. My friend and I both have Amigas so I decided to make a modem cable so that we could play against each other using *F16 Combat Pilot* and *F16 Falcon*.

We have found that *F16 Combat*



You can use PIP to transfer data to a PC - or get it done by an agency.

Pilot will work perfectly well but *F16 Falcon* will not. Both Amigas crash, flashing a software failure. I know the game is OK because it works fine with one player. The cable seems OK because it works fine with *F16 Combat Pilot*. I made the cable to comply with the RS232 standard configuration. Please help. Martin Warmington, Crowborough, East Sussex.

Be careful when you talk about the 'RS232 standard'. RS232 is notoriously non-standard and many different serial configurations claim RS232 status. I would agree that the cable seems to be OK otherwise it would not work with *F16 Combat Pilot*, therefore the problem must lie with the software. If any techtipers have successfully managed to connect two Amigas and then run *F16 Falcon*, I would like to know about it. Call your Uncle and I'll pass on the guff...

TIP Freeze frame

This is a tip that I discovered for anyone using an Atari ST computer who wants to be able to pause

games that don't have a pause mode. You must make sure that your computer doesn't have a printer attached otherwise some very strange results will ensue. When you come to a position in the game that you wish to pause at simply press both the **ALTERNATE** and **HELP** keys at the same time. This will stop your computer for approximately 20 seconds whilst the machine tries to perform a screen print. After the 20 seconds the action will start again as if nothing had happened. Unfortunately, this tip will only work with some games.

Martin Scold, Douglas, Isle of Man.

HELP! PC Joyce

After several years of computing on my Amstrad PCW8256 I have decided to throw caution to the winds and buy an Amstrad PC compatible. The decision is based upon my use of PCs at work and would like to be able to bring home data and access on a PC at home. My question is that several years of PCW computing means that I now have a large collection of word pro-

cessed documents that I would like to use on the PC. Is there anyone who can sell me a three-inch disk drive to fit to my Amstrad PC1640 so that I can use these files? Expense is not a consideration as I am willing to spend whatever money necessary to use these files. Please help as I don't know who else to ask. Matthew Radlett, Coldling, Shropshire.

Expense is no object? Within minutes of this issue hitting the streets unscrupulous bedroom electronics experts everywhere will be ringing my telephone bell in an attempt to glean your number. I know of no supplier of three inch drives for the Amstrad or indeed any other PC compatibles. The only solution is to construct a serial cable or buy one from Meadmore (051 521 2202), connect the two machines together, grub about in the public domain for some suitable comms software and transfer the files serially. Alternatively, you could try consulting a data transfer agency who specialise in these operations. Call Mapej on 01 640 7676 who perform transfers between PCWs and PCs for a small fee. You might also have a rummage in our sister publication *8000 Plus*. Many data transferers and other PCW service providers advertise therein.

AMIGA BLIT

Roland Enter Amiga Market

Roland, which is best known for its range of professional synths, samplers, drum machines etc, has announced the release of their first product for the Amiga.

The CM-32L is a stereo sound module designed to enhance the Amiga's sound capabilities beyond belief. The module is based around Roland's highly acclaimed Linear Arithmetic synthesis system as used by the popular D50, D10/110, D20 and MT32. LA Synthesis works by combining sampled sounds with synth tones to create some of the most impressive and life-like sounds available on any synth.

The unit is designed to provide professional music scores and sound effects for all types of software. Software that supports the CM-32L presently consists of a series of six adventure games from the American software house, Sierra-online. Roland can be contacted on 01 568 1247.

Boing!

Unlike certain machines I could mention, the Amiga mouse is in actual fact quite a high quality little rodent. However, there comes a time in every user's life when you feel in need of a change from the norm. In the case of the Amiga mouse, there's not really a great deal to choose from unless you feel adventurous with the soldering iron.

At last there is an alternative in the shape of the rather strangely named Boing! mouse. Why the mouse is called 'The Boing! mouse' I do not know (Perhaps it's got something to do with the demo of the same name? Anyone care to enlighten me?), but it certainly seems to be a worthy contender.

Among its long list of assets is that the Boing! mouse doesn't actually have any moving parts. The Amiga mouse, as you will no doubt all know, can get rather clogged up after continued use and therefore Boing! avoids this problem by employing an optical mechanism. The mouse works by shining a light onto a specially designed reflective mouse mat that contains thousands of tiny metal squares. The position of the mouse pointer is calculated by monitoring the amount of metal squares passed over relative to the mouse's last position.

Unlike the Amiga mouse, the Boing! mouse offers not two, but three separate mouse buttons. The two outside buttons function exactly the same as their Commodore equivalents while the centre button is designed for use with the soon to be released X-Windows and Unix. In most cases, pressing this extra button will have no effect.

I've been using a Boing! mouse on my Amiga for over a week now and my initial impressions are favourable. The unit seems more responsive than Commodore's offering and is well worth considering if you've got £80 floating around. Contact the Amiga Centre Scotland on 031 557 4242 for further details.

Halt Citizen!

Yes folks, cheats corner returns with a bumper selection of the very latest cheats for all your favourite Amiga games. If you've found any great cheats, then why not send them in and you too could find your name

within AmigaBLIT.

The first game to get the AmigaBLIT treatment is Ocean's highly successful Robocop, the game of the film (did you know that Robocop 2 is being filmed as we speak?). How does infinite energy sound to you? Well, just pause the game and type BEST KEPT SECRET (including spaces) and you'll have a matey.

Here's a quick cheat for all you street-fighters struggling with US Gold's Vigilante. Firstly, get yourself onto the highscore table and then enter your name as 'GREEN CRYSTAL'. This then turns on the cheat mode. Now, during the game you can increase your lives by pressing F1 and skip levels by pressing F8.

Time for a quickie. Within Imagine's Navy Moves, the access code for level two is 786169.

Assemble Yourself

After previewing Argonaut's long awaited ArgAsm assembler system a couple of months back, I've finally got my hands on a copy. The version I was sent was still in the beta test stage but even in its present form, ArgAsm leaves the competition standing.

ArgAsm is a complete Amiga assembler development system that consists of an integrated editor/assembler and a separate CLI based assembler for those of you who don't want to scrap your old text editor. The ArgAsm editor/assembler, ArgEd, is similar in many respects to HiSoft's Devpac 2, but unlike HiSoft's offering, ArgEd is multi-window. Being multi-window, ArgEd allows you to edit several source files simultaneously (you can even edit a single source file in separate windows!).

Although ArgAsm's main selling point is its blindingly fast assembly speed (typically seven times that of Devpac 2!), another very impressive aspect of the package is the high degree of compatibility with existing Amiga assemblers. ArgAsm is directly source compatible with HiSoft's Devpac (1 & 2), Inova's CAPE and Metacomco's ASSEM. It supports all assembler directives from three assemblers and therefore any source code produced for use with any of the above should assemble without modification under ArgAsm.

Unlike Argonaut's games software, the company plans to market ArgAsm itself. ArgAsm is available for £59.95 from Argonaut who can be contacted at 7 Millway, Millhull in London.

Jason Holborn



• ArgAsm - the fastest assembler in the west!

Message Port

If you have any views on any issues raised within AmigaBLIT, or in fact the Amiga scene in general, then why not air your views by writing in. Similarly, if you have any great tips, tricks or cheats for the latest Amiga games, then I'd also love to hear from you.

Send your letters to: JASON HOLBORN, AMIGABLIT, 4 QUEEN STREET, BATH BA1 1EL. Thanks.



Laser Power

Lashing out enormous amounts of dosh on a laser printer is very well but when you get it home and try linking it up to your favourite word processor you're likely to find it doesn't do as much as you thought. In fact, if you don't have a laser driver you're going to find it doesn't do anything at all. The majority of DTP packages and a handful of new ST word processors are supporting the laser printer but for the majority of applications you're still going to need some sort of Epson emulator. Well, SDL has the answer.

It's now selling an SLM804 Epson FX printer emulator, designed to solve all these problems. Since the software supports Epson codes you should encounter no difficulties printing out listings, screen dumps and ASCII files. The emulator is a desktop accessory that can be made active at any time. When active it takes all output that would otherwise go to the parallel port and diverts it to an emulator page buffer held in memory. During printing, this data is then converted into a format that is understood by the laser printer.

A dialog box allows you to assign various fonts to different attributes. On top of this you can provide output in bold, italics and emphasized text styles. Although only two fonts are provided with the package, others can be loaded from disk without any problem. Various font formats are supported, including GDS.

It's just about possible to use the emulator on a 520 but the larger STs (2Mb and above) are recommended since an A4 page of high-resolution graphics can use a page buffer of up to 1Mb.

The emulator costs £29.95 and is available from SDL who can be contacted on 01-309 1111.

Start of a new term

Comms addicts should instantly get their hands on the latest version of Uniterm, the PD comms software which is far better than the majority of commercial comms packages.

Uniterm is given away free on the majority of ST-specific bulletin boards offering downloadable software.

Although the software doesn't support viewtext (so you can't contact the likes of Prestel and Micronet) you can talk to bulletin boards without any problem. The software includes a dialler where you can enter the telephone numbers of all the systems you contact regularly. These can be dialled from within Uniterm using the standard AT command set.

There are the usual data capture and file display routines although an Edit facility here comes in useful. This allows you to remove that useless information from a captured file and save it back onto disk.

Xmodem, Ymodem and Kermit up- and down-loading protocols are supported and although this is a lot more than other packages, there is still no Zmodem protocol. Since Zmodem is very fast, it's useful to find support for it. Where Uniterm really wins is with its ability to execute programs held on disk

from within the software. Hence, there's no difficulty in getting a stand-alone Zmodem program and executing it from within Uniterm. Problem solved.

If you don't yet have a copy of Uniterm then try contacting My Little Phoney on 0865 773277 where copies can be downloaded for free.

A new phase?

Every now and again a seriously major game appears for the ST. The last time it happened was with EA's Populous which raced straight to the top of the charts. Now Mirrorsoft is setting its eyes on achieving the same results with Interphase.

The game is set in the future and you play the role of Chadd who is trying to salvage a top secret tape from inside a protected Government building. To achieve this task, Chadd has found a way inside the security computer in typical Max Headroom style. Now he must disable the defence systems one by one to let his girlfriend run through the building and find the tape.

The game is split into two sections - a 2D map of each level of the building and a 3D view of the internals of the computer. Using the 2D map you can zoom in and out to find cameras, high-voltage pads and to keep an eye on the droids who hang around looking for your girlfriend. Chadd must disable the cameras and open doors to let his girlfriend safely through. To do this you lock onto an item, the camera for example, and then go inside the computer. Arrows direct you around this 3D universe until you find the camera which is disabled by firing at it. Inside the computer you'll also encounter enemies trying to blast you to death.

Interphase is very much of a strategy game. Security cameras and doors must all be disabled in the correct order or Chadd's girlfriend will never see her next birthday. As such, it's unlikely to appeal to shoot-'em-up addicts. Nevertheless it's a game not to be missed if you want something that boasts superior 3D graphics and an original concept.

Catch issue five of our sister mag ST Format for the full exclusive review.



• Blundering around the 2D map in Interphase

Seeing double

Version 3.02 of the enormously popular disk formatting utility from Double-Click software is now available from most PD suppliers. This updated version allows you to format an ST disk up to 10 sectors across all 82 tracks like the old version but a number of new options are on offer. The software now supports a second 5.25-inch drive, formatting to 40 tracks. Various step rates can be defined here as well.

A verify option makes it possible to check the tracks on a disk but best of all is the support for MS-DOS formats. An MS-DOS boot track can be written onto a previously formatted disk which has possibilities if you transfer software to the PC. On top of this, there's also support for Spectre 128 and the option to write an executable boot-track onto disk. All in all, great value for money.

Kimberly Harmaugh

520ST-FM SUPER PACK



The Atari Super Pack is ideal for you if you want to get off to a flying start with the best entertainment software. The Pack includes a 520ST-FM with 1Mb RAM, a built-in 1Mb disk drive, over £450 of top games and a joystick. If you buy the Super Pack at Silica Shop, we will add our own ST Starter Kit (worth over £200). Free of Charge. Return the coupon for details.

£399

With SM124 mono monitor: £498 INC VAT

With SC1224 colour monitor: £698 INC VAT

1Mb DISK DRIVE £450 OF SOFTWARE ARCADE GAMES

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Atari CX40 Joystick	Atari Corp	£4.99
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FREE ATARI BUNDLE VALUE: £458.97

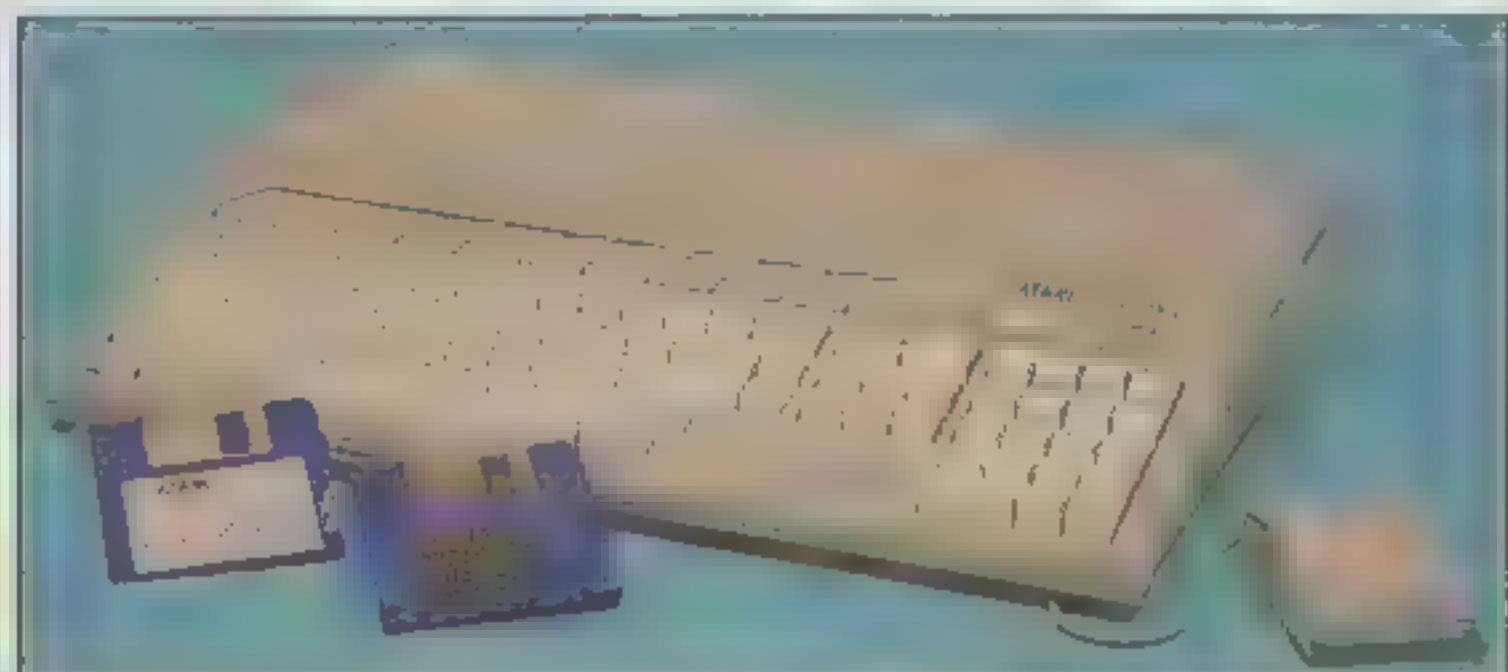


ST COMPUTERS

The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge of the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established in the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For a full list of the software available, as well as details of the ST range, complete and return the coupon below.

All prices correct at the time of going to press. E&OE

520ST-FM EXPLORER PACK WITH BUILT-IN 1Mb DISK DRIVE



The value for money offered by the Atari ST range is reflected in the Explorer Pack featuring the 520ST-FM computer with 512K RAM. The 520ST-FM computer now comes with a built-in 1 Mb double sided disk drive as well as a free mouse controller and a built-in TV modulator. The new 520ST-FM Explorer Pack includes the 520ST-FM computer, the arcade game Ranarama, a tutorial program and some useful desktop accessories. In addition, if you buy the Explorer Pack from Silica, we will give you the Silica ST Starter Kit worth over £200, FREE OF CHARGE. Return the coupon for details of our Starter Kit and of the full ST range.

£260

ONLY £299 + VAT =

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NOW WITH TV MODULATOR

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200). Free Of Charge. Return the coupon for further information.



£499

INCLUDING VAT

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NORMAL RRP: £884.82

LESS DISCOUNT: -£385.82

PROFESSIONAL PACK PRICE: £499.00

2Mb & 4Mb MEGA ST

The MEGA computers are styled as a lightweight keyboard with a separate CPU, connected by a coiled telephone style cable. There are two versions of the MEGA ST, one with 2Mbytes of RAM and the other with 4Mbytes. Each version has a 1Mbyte double sided disk drive built-in to the CPU unit. The MEGA ST's do not come with modulator built-in and must therefore be used with a monitor. With every MEGA ST purchased, we will add the 'Professional Pack' software (worth £384.83) detailed above, plus the Silica ST Starter Kit (worth over £200) both Free Of Charge. Return the coupon for further details.

2Mb MEGA ST

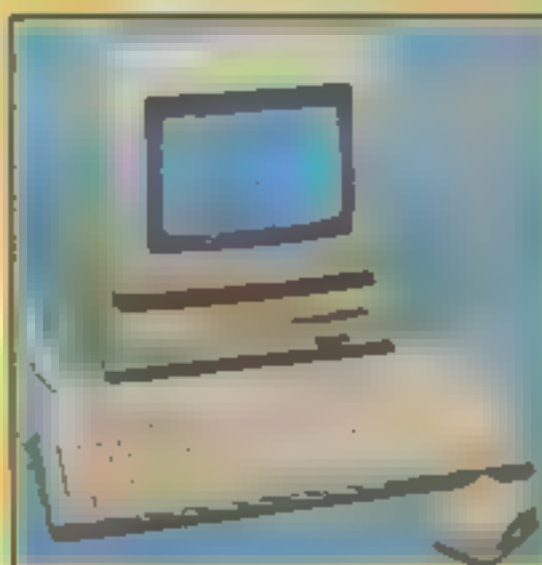
£899

+ mono monitor = £998
+ colour monitor = £1198

4Mb MEGA ST

£1199

+ mono monitor = £1298
+ colour monitor = £1498



DTP PageStream £149 + VAT = £171.35

Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £148 (+VAT=£171.35) and, because it works with an Atari 1040ST and a Silica SP-180AI printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the 'DTP' box in the corner.

- TEXT-FLOW AROUND GRAPHICS
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- POSTSCRIPT COMPATIBLE
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Do you already own a computer
if so, which one do you own?

DTP ☐

YOUR FORMAT

MACHINE - SPECIFIC COLUMNS



Look through any Windows

Rumour has it that IBM are leaning on Microsoft to release version 3 of its *Windows* operating system quietly and with the minimum fuss. The system is said to be largely icon-based, have a much nicer user interface, be quicker than current versions and to do most of what anyone baffled by DOS could want. Why then should IBM be less than happy with its imminent release?

The simple answer is that for non-corporate users it knocks the pixels off *Presentation Manager*. It uses extended memory - as does *Windows 2* - to break the 640K barrier with multi-tasking. It doesn't need 4Mb of main memory to run and it will run as many DOS programs which are available now, as a PC has memory for.

IBM wants to push OS/2 with *Presentation Manager* as it has implemented the same user-interface on its mini and mainframe machines. It can promote a consistent display across its complete range of machines, a very appealing selling point when pushing machines into large companies. The last thing it wants is for the micro-computer buyers to see these companies to come back and say 'Hey but *Windows 3* does virtually all of what *Presentation Manager* does, takes up a lot less room, runs everything we have running now and costs a lot less'.

Fortunately Microsoft, the biggest software supplier in the world, is still enough of its own master to continue to bring *Windows 3* to market. However the size of the product's advertising budget will show how much heed it's paid to the biggest hardware supplier in the world.

text is micro-spaced ■ the same width ■ the section of keyboard. Micro-spacing is adding small spaces between each letter in the line to achieve the justification.

The problem occurs ■ trying to get *Timeworks* to justify two words into a window. It will justify them, but only by putting spaces between each word. The final solution was to manually kern - add small space between each letter pair in the words ■ that they fitted the width. If GST are looking for new features for *Timeworks DTP 2*, then tracking the ability to automatically adjust inter-letter spacing across a body of text - would come high on my list. Actually, I should be able to check GST's intentions out myself, ■ they've invited me ■ 'After Show Drinks' this Wednesday. They are releasing version 1.2 of the program ■ the show.

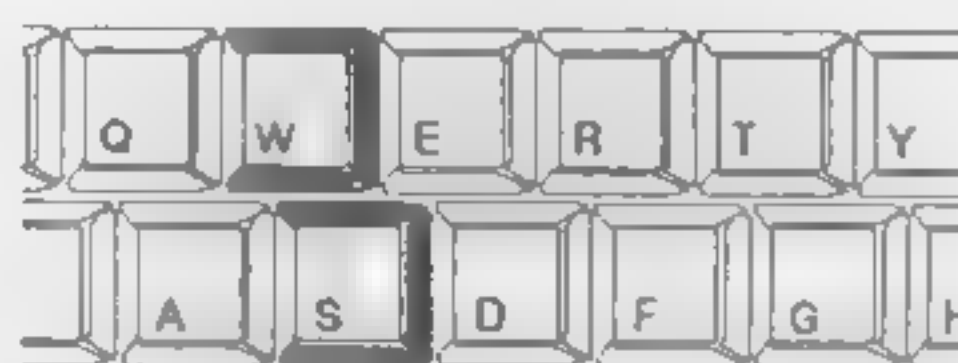
Floptical disk

After the revelations of a few weeks back, I can reveal second and third approaches to the 'get 20Mb on a 3.5-inch floppy' idea. Currently available in the States ■ a device called the floptical drive, which claims to do just this. The device uses standard 1.44Mb 3.5-inch disks which have a special laser-track etched into them ■ provide much more accurate head positioning than with a normal mechanical drive.

The laser-track works very much like the track on a Compact Disk, ■ read by a small infra-red laser and allows up to 1250 tracks per inch on a standard disk. This increases the capacity of the disk ■ just over 20 Mb, with an access time of 65ms, similar to some of the slower hard disks. This drive is rumoured to cost around \$600, and details can be had from Insite peripherals on 0101 408 946 8080.

Even higher capacity is available from the Flextra drive from Brier Technology which uses a double layer of magnetic material deposited on a specially-made disk. The under layer ■ encoded with the tracking information which can only be read, not changed by the drive. The Flextra system allows up to ■ Mb of data and has an access

time of ■ ms, making it very comparable with today's mid-range hard disks. The special disks for this drive will probably cost around \$20 twice the price of the floptical disks. With twice the capacity, though, they will still be very cheap, replaceable media. Brier are on 0101 408 435 8463. Phoning after 6 p.m. costs much less, and gets the Americans



SIMON WILLIAMS
FREELANCE JOURNALIST

Kerning vs tracking

No, not the latest in a series of WIMP look-alike cases in the US, but a cry from the heart for some way of altering the tracking ■ *Timeworks DTP*. A friend recently designed a letterhead for me on the dear old Macintosh which should have been just the job. Unfortunately, the VAT number on ■ was not mine - don't ask me where she got it! - and I'm soon to move, so the address will be wrong too. I decided therefore, to take her design and copy it on the even older PC to produce a temporary version of the letterhead.

The design ■ elegant, and based on the fact that my initials SW come close together on a computer keyboard. By using a section of the keyboard, the designer managed to suggest my link with computers as well as highlighting the name. Below the graphic is my name and occupation, in a Palatino font. This has a nicely classical look to it as the

when they're out of bed.

Menacing move

According to my mate Matt Nicholson in the current issue of *PC PLUS*, Psygnosis, creator of many wonderfully graphic games, are about to have a blitz on the PC. They intend to convert several of their brainstorming Amiga and ST arcade releases onto your favourite IBM clone. That includes *Menace*, my all-time favourite game of '89. This compulsive blast-'em-up put schedules on the erstwhile *ST Amiga Format* behind for months as the then co-editor attempted in vain to reach level 5.

If the PC version of *Menace* is half as good as the Amiga version, I may have to commit a mortal journal sin and buy the thing - such is its attraction.

Simon Williams

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Rant of the week

Something which has provoked anger, frustration and swearing in equal amounts from me recently is the constant writing off of the Spectrum as a computer to play games on. The main argument used against our old but worthy friend is the graphical and audio superiority of the 16 bit machines and games consoles. O.K. so when it comes to pretty graphics and digitised sound tracks the Spectrum does indeed get beaten hands, feet and head down by the aforementioned micros. Surely though the most important ingredient for any game is playability and most Speccy games have heaps of heaps of it. In fact, because our machine is a bit lengthy in the tooth, programmers seem much better acquainted with ins and outs and as a result you'll find a good proportion of multi-format games play best on the Spectrum rather than these upstart ST's and Amigas (examples: *Timescanner*, *Carrier Command*, *Operation Wolf*, *Robocop* etc).

There is also the considerably huge matter of range to consider and (don't bother correcting me if I'm wrong) the Spectrum must have one of the largest selection of titles for any computer. We're talking several thousand different titles spanning every genre and sub-genre of computer games. Nearly all the software companies around at the moment release their products for the Speccy and along with some smaller but just as impressive independents, provide enough advertising to feed three monthly Spectrum magazines. They're also widely available and definitely not just confined to specialist computer shops. You can find Speccy games in newsagents, garages, vending machines in mens toilets everywhere.

And what about price? The most hotly awaited, plushy packaged and freebie soaked Speccy games cost a maximum of £14 which if my calculations are correct is about the same price budget software goes for on some other computers.

The Spectrum might be a few epochs away from the state of the art but its still a great not to mention cheap way of playing some brilliant games. I rest my case.

Seriously though folks

William Heath of Wigan wants to know about serious software for the Spectrum. "I'm a recent recruit to computing and all I've done so far with my +3 is zap aliens and rescue princesses," he writes. "Are there any decent word processors or databases for the Spectrum or should I sell out and defect to an ST?" He asks. Thanks for writing William, yes there are lots of serious packages available for the Spectrum and as a +3 owner even more pieces of software are just waiting to jump from the shelves into your grasp. On the word processor front the package Speccy owners should go for is *Tasword*, the +3 version which is a real spec-stretcher and combined with the *Tas-spell* spelling checker program gives you a pretty professional writing set up. Contact Tasman Software, Springfield House, Hyde Terrace, Leeds for more prices and more details on those I'm not so well informed when it comes to Databases but one I've seen called *Masterfile* +3 is very good, if perhaps slightly limited, and well worth the £25 so admission price. Track this one down in your

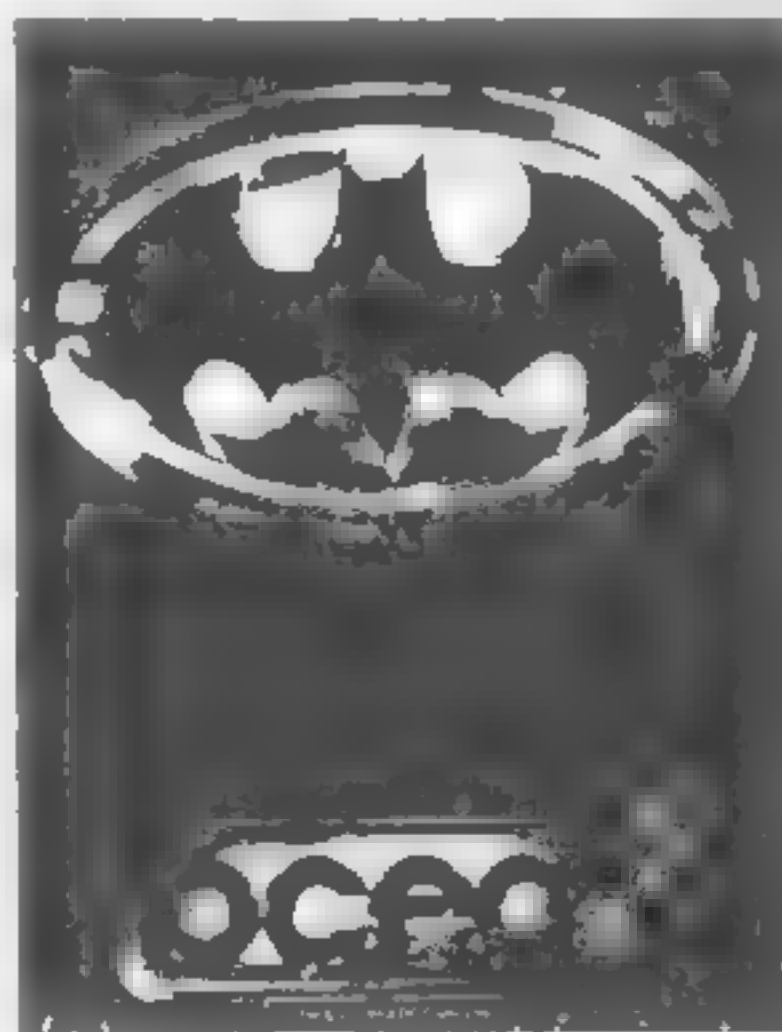
local computer shop or get in touch with P.C.G. a company who stocks a large range of Spectrum application software as well as their own brilliant desktop publishing package which I've raved about in past columns. They can be found at 61 School St, Barrow-in-Furness, Cumbria LA14 1EW.

Batman

Here's a complete solution for the first part of Ocean's brilliant *Batman* film conversion. It doesn't make for riveting reading but should prove useful if you haven't progressed to the second part yet.

To start off, up, right, avoid dropping acid, up, avoid bomb thrower, up twice and keep going left until you reach a gap in the floor. Fire your Batarang diagonally and climb onto the platform, repeat the same procedure and then, up, right, down, right, down, right, and then keep dropping down until you reach the factory floor. Next go right as far as possible and then up until you reach the top level. Then right, down, down, down, right, down, down, left and down until you reach the floor. Then its right as far as you can go and up, up, right as far as possible and then down, the way to the bottom floor. Avoid the acid drips as you progress right and then climb up twice and then proceed left. You can now avoid the falling acid drips by crouching down. Once you've done that its left, up, up and then a diagonal swing, after which you need to go right, down, right, down and right up, the edge of the platform. Fire your Batarang diagonally again and then drop down until you're standing on the same level as a baddie. KAPOW! him and then go left along the platform and drop to the floor. It's then a case of going right, up, right, up, lobbing a Batarang at the bomb throwing baddie, right past acid and then up twice, left, up three times and right to the very edge of the platform. When the baddie appears on the other side of the screen let him have it with a carefully timed Batarang and watch a nicely animated sequence as Jack Napier falls into a vat of acid.

If you've got any more tips or pokes for *Batman* send them to me at the address below without delay.



Hype help

If you're a software house who wants a product or service hyped, a devoted Speccy owner who wants to divulge a tip, poke or wrinkle (free software for the best ones) or if you've got anything to say remotely connected with the Speccy get in contact with me at Spex, New Computer Express, 4 Queens Street, Bath BA1 1EJ. If you want a personal reply, autographed photograph etc please enclose an s.a.e. Any delay in getting back to you will be because all the mail has to be sent on from the Express offices.

Robin Alway



Classic argument

The debate goes on. Over the past few weeks we've had letters for and against the proposition that Amstrad owes some allegiance to the CPC. Now a Mr John Hudson of Huddersfield has written what I believe may be the definitive statement on the CPC's defence.

"Yes, the CPC is a classic," he argues, "the 6128 can run virtually every major programming language, version of several major software packages, bit mapped and object oriented drawing packages and communications software."

"It has suffered in the UK from being repositioned as a games machine when it ought to have swept the educational market. It is still the best all round computer offering good games and software for the computer illiterate and high powered software and a reliable, easily understood architecture for programmers."

"Because it is a good 'all rounder' it will never attract those wanting a computer for specialist applications, but neither need it go out of fashion this century."

"It offers everything for a newcomer to computing - whatever age - and while newcomers will always be a minority of the total market, they will be a significant minority in the UK, EEC and the rest of Western and Eastern Europe for at least another decade."

"I would 1) give it an external facelift, a new colour scheme, 2) look carefully at changing to a high resolution TV monitor (and/or TV modulator) when high resolution TVs are introduced early in the 90s and 3) consider the feasibility of reworking the video RAM to take advantage of higher resolution screens while keeping the original 464 mode. Otherwise, I would leave well alone."

And John concludes on a note of high optimism: "That should notch up another six million sales before the end of the century."

It's at this stage that John loses me. That the CPC is a classic of its kind I wholeheartedly agree and I am even willing to concede that John's three point plan would be workable and attractive to the would-be first time buyer. What I don't believe I must confess, is that Amstrad has either the wit or the will to do more with the CPC.

I wish I could believe you, John, but I cannot. Amstrad has shown itself singularly incapable of exploiting the machine since its introduction of the 6128, and has consistently failed to take full advantage of the market's desire for such a cheap, complete and versatile home system.

With the news of Dixon's decision to cease stocking the machine, not only is the CPC now unlikely to sell another six million sales, it is not going to reach its potential in this Christmas's UK market.

The CPC book of oddities

● Did you know that Ivor Spital, the man originally chosen to supervise the ground-work on the CPC's development in early 1983, claims to have been assigned the task on the toss of a coin?

● And while we're at it, it's worth recalling the bizarre gimmick Amstrad used to publicise the CPC. The launch was held on Thursday 12th April 1984 in the Great Hall of Westminster School, and Amstrad gathered together some rather famous names, such as Einstein, Archimedes, William Shakespeare,

Monet and Ravel, to attract attention to its "really rather remarkable new computer."

It must be odd to spend your life named after someone famous, and suddenly acquire your 15 minutes' worth because of it. In fact, it is thought that this was the only time in these people's miserable existence when they were ever truly happy.

Lifetime drive

CPC owners fed up with their single-sided 178K drives have now got a choice, with MGT's new Lifetime Drive. 3.5-inch second drives for the CPC are nothing new, but where MGT's drive scores of course is in its adaptability. Simply by buying a new lead and altering a series of switches at the back of the unit you can use it with just about any machine currently on sale. This means that should you ever decide to upgrade to, say, an Amiga, your CPC may have to go out for the dustmen but your spare drive will plug straight into your new machine. What sounds like a terrific idea in principle though, does have one or two minor drawbacks.

Firstly, at £129.95 for the drive itself and a further £18.50 for the CPC lead, MGT's offering isn't cheap. Second drives can normally be had for only £70-£80.

Secondly, just about any second drive is potentially a "lifetime" drive. As long as your machine has got a disk operating system that can work with an 800K drive and providing you can find the pin-outs and make up your own leads, you can use any 3.5-inch drive with any machine.

Thirdly, to make full use of an 800K drive, the CPC needs a special disk operating system such as ROMDOS or RAMDOS from KDS, or RODOS from Romantic Robot - any of which will set you back an additional £30-odd. Such an appropriate operating system isn't provided either with the MGT drive or its dedicated CPC lead.

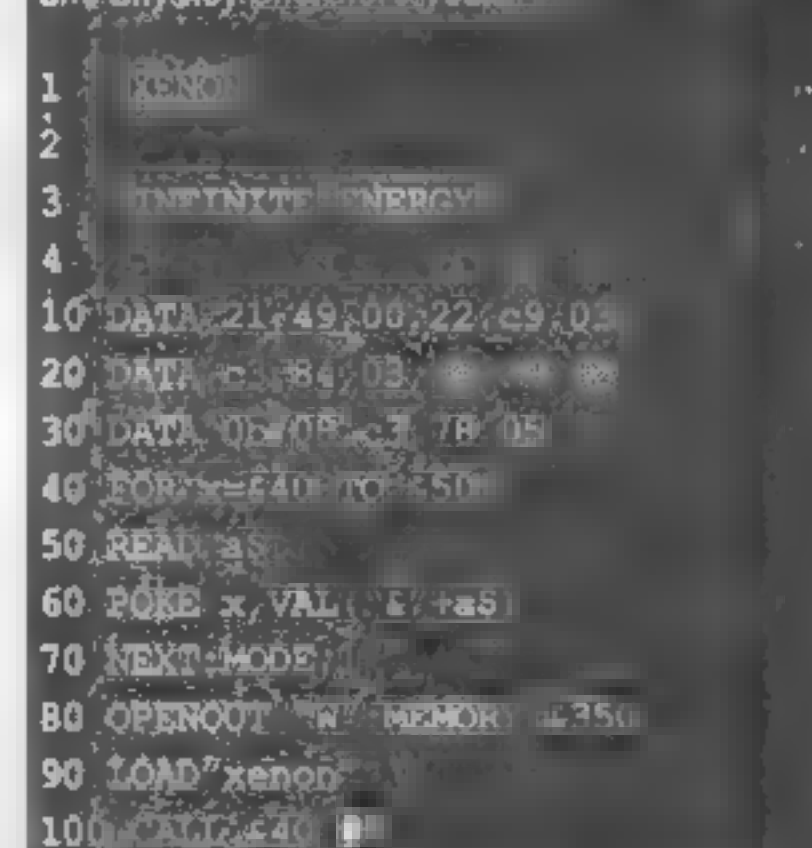
MGT's Lifetime Drive is a neatly packaged solution to the upgrading problem whereby complete novices don't have to worry about compatibility problems. However, for anyone who knows about computers, MGT's solution is to a problem that didn't really exist in the first place.

Steve Carey

Xenon staying power

Mapperley Man, alias Phil Howard, a good man and true, if ever there was one, has been active on your behalf once again, this time turning his *Poke Power* on Xenon. It works on the tape version.

To use it, rewind the game tape to the start, type in the poke and then type RUN and press the small Enter key. Press play and any key and there you are!



Written any good pokes lately? Send your infinite green traffic light cheat for *Crazy Cars* to: CPC Centre, NCE, 4 Queen St, Bath BA1 1EJ.

The best poke each week gets a big girlie kiss, and a mention about it (what do you think I am, made of money?).



Games on heat

After a cool spell the games market seems to be heating up with the release of some interesting new programmes.

Pick of the bunch on size alone has to be *UIM* or *Ultra Intelligent Machine* which very much resembles an underwater version of *Elite*. Feeling overawed by such a massive game I passed it onto a colleague for in-depth assessment. Unfortunately space being limited you will have to make do with his conclusion below.

"Overall this is very much a copy of *Elite* with the trading aspects much expanded but inferior combat sequences. It is still very playable and will keep players engrossed for months and months."

Prices are £19.95 for 5.25" disk, £21.95 3.5" disk and £29.95 for the Archimedes version which won't be available until December.

The other biggie is Bond film spin-off *Licence To Kill* from Domark and a full review will follow next week.

Question time

Thanks to reader Mark Beovers for sending in a short letter packed with questions and tips. His first: "Why is the BBC faster than the Electron?" I won't answer this week, instead I'm going to devote most of a column to the differences between the two machines.

His second: "Will my BBC run faster if I

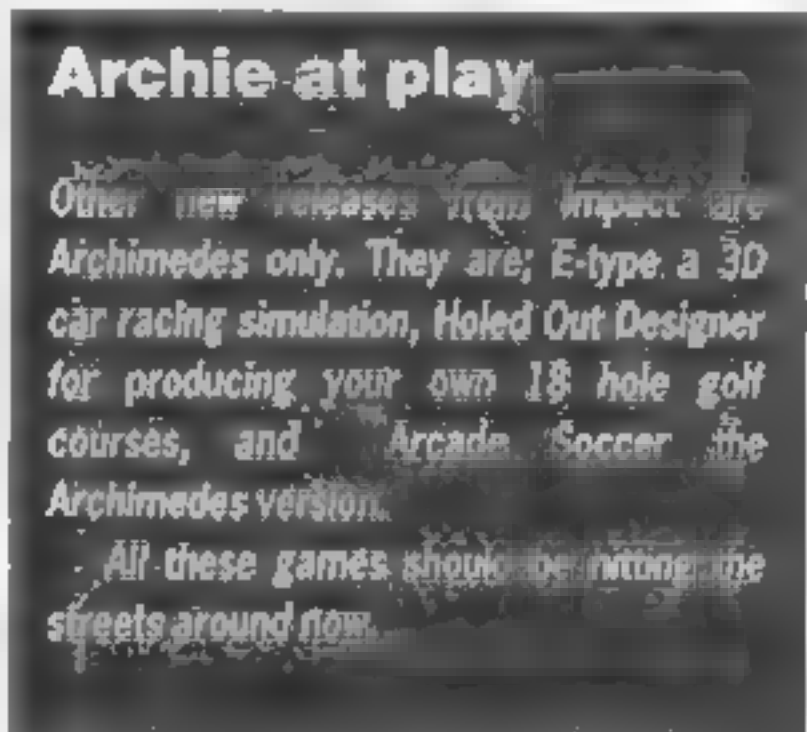
replace the 6502A CPU with a new 6502?" is a little easier and the answer is it depends on several factors. The differences between the 6502A and 6502 are actually very slight, being very mainly a few extra machine code instructions. A straight replacement chip for chip will yield no gains whatsoever. However, you can obtain upgrade kits that clock the chip at a higher speed resulting in faster processing.

A second processor, such as Acorn's own, will do the same and has the bonus of including extra RAM. The main is an upgrade to a Master 128 or Compact. These machines not only have the new processor and more RAM but software written to take advantage of it, namely BASIC IV.

In some cases, for example tangents and logarithmic functions, the speed increase is several orders of magnitude, but you can generally expect 10-20 per cent more processing power.

He also asks whether disks formatted under ADFS on a 3.5" drive will work on an Archimedes. Yes they will, the Acorn recognises three formats: 800k F, 800k D (old Map) and 840k L (old map), the last being the same as on the BBC.

Andrew Brown



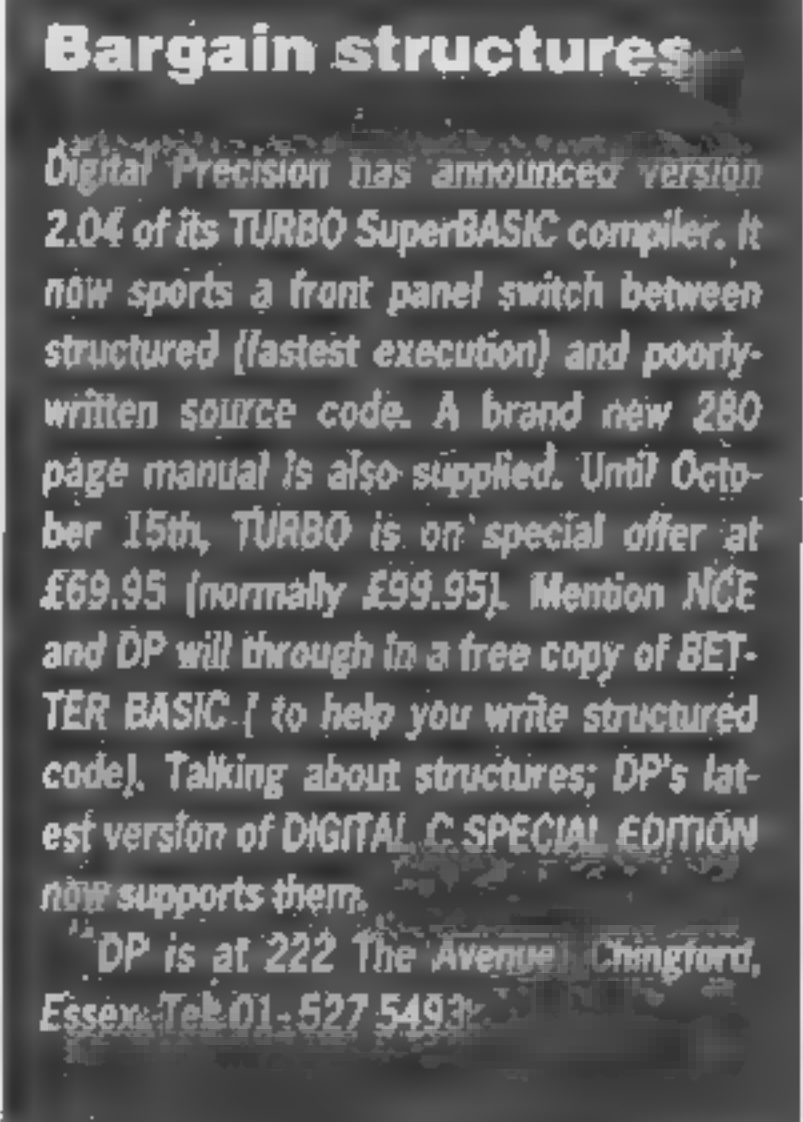
sions, accounts software, and CP/M 68k for the QL.

Interestingly CP/M 68k subsequently became the basis for TOS, the ST operating system. Like the expansion console, the memory expansion units were notable for their enormous size, due to the use of 64k DRAMs when everyone else was using 256k devices.

Unfortunately the Quest add-ons never proved popular and very few punters wanted CP/M 68k on their QL at any rate. Quest eventually abandoned the project and concentrated on the PC market. Some of the RAM expansion units recently came on the market at knock-down prices.

The froglets? As the long afternoon wore on, they lost their ability to cling to their owners' lapels and littered the floor in sad little heaps.

John Torofex



Digital Precision has announced version 2.04 of its TURBO SuperBASIC compiler. It now sports a front panel switch between structured (fastest execution) and poorly-written source code. A brand new 280 page manual is also supplied. Until October 15th, TURBO is on special offer at £69.95 (normally £99.95). Mention NCE and DP will through in a free copy of BETTER BASIC (to help you write structured code). Talking about structures, DP's latest version of DIGITAL C SPECIAL EDITION now supports them.

DP is at 222 The Avenue, Chingford, Essex. Tel: 01-527 5493.

COMMODORE 64 OWNERS

Our apologies for the lack of a Commodore 64 column this week. This is due to the usual circumstances beyond our control. But you could help avoid it happening again. Can you write clearly, interestingly and knowledgeably about the C64? Then we want to hear from you.

Write with a sample of your writing style, perhaps a game review, to:

Commodore Writers,
New Computer Express,
4 Queen Street,
Bath BA1 1EJ.



QL technical review

I've just received the inaugural issue of *QL Technical Review*, a quarterly publication produced by CGH Services. Its 32 A4 pages include reviews of Qjump's QRAM and DP's IDIS disassembler, a machine code tutorial, and hints and tips, as well as an article about using the Quest QL expansion system. Like CGH's QL Adventures Forum, *QL Technical Review* is a good read, and should prove well worth the subscription of *5.00 for four issues. It even boasts a colour supplement - a four page insert printed on yellow paper!!!

Order from CGH Services, Cwm Gwen Hall, Pencader, Dyfed, Cymru, SA39 9HA.

A froggy do

My mention above of the Quest QL expansion system reminds me of the occasion on which it was launched, a few months after the QL became available. QUANTA co-founder Leon Heller attended the event, which was held one afternoon in a docklands wine bar. Liberal quantities of Bucks Fizz were poured into the assembled multitude, which consisted mainly of assorted hacks and hackettes. For some reason, everyone had a small green self-adhesive plastic froglet attached to their lapel.

In addition to the expansion system, which was a massive black console, Quest also unveiled their disk system, memory expansion



Third times lucky

Forget MSX 1, 2 and even 2+ because believe it or not, I have just heard rumors of an MSX 3 computer. The information I have received comes via the offices of MSX LINK and originates from a LINK member, a gentleman who is himself Japanese. It seems that the aforementioned gentleman returned to his homeland for a short time, and while he was there he was shown a prototype of an MSX 3 computer. He goes into some detail regarding the specifications of the machine, so the beast obviously exists, even if the Japanese deny its existence.

Briefly the specifications read as follows. It is a 32 bit computer with 1 meg 3.5-inch drives and a hard disk built in. It is switchable between eight bit and 32 bit, thus ensuring total MSX compatibility, and has very high resolution screens like MSX 2+. Should this computer be launched in Europe, it is sure to make Atari and Commodore sit up and take notice. Let's hope that this time should the machines become available here, the Japanese don't mess it up like they did last time. Maybe one way to please the British press this time is to actually build the machines in the UK, now there's a thought for you, it would certainly please Maggie.

Keen as a blade

We have yet another software house produc-

ing games for the MSX system, this time from a brand new software house called Blade Software. The first game to be released for the MSX will be *Lazer Squad*, due out on 12th October and priced at £9.95. Blade Software have also informed me that there will be more titles for the MSX, all those titles that are multi-format will include an MSX version. I hope Blade software can produce some exciting titles for the MSX users and wish them luck with their new venture, looking at the number of software houses that are going to the wall, they may need a little luck.

Collectable

Nightdare Ltd of Torquay tell me that they still have plenty of copies of the Games Collection available. If you remember, this is a collection of 34 MSX games, on tape, disk, or CD, and at only £21.00 for the tape version (six cassettes). This compilation is really great value, and although I understand that £21.00 is a great deal of money to a youngster, maybe a letter to Santa this Christmas will be productive. The quality of the games on this compilation is very high. The game *Bank Buster* for the MSX 2 is alone worth a tenner of anyone's money.

Help

Can anyone out there help a friend of mine complete the adventure game *Knight Orc*. It seems he has come across a thorn hedge which he has to pass, but he has yet to find a way through, around, or over it. If anyone can help, please write to MSXtra with your solution. That's it for this week, good MSXing everyone.

Keith Neal

YOUR FORMAT

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Write on

There are two sorts of PCW owners (as Bertrand Russell would have said: those that can be put into one of two types and those that can't).

The first type spends their life protecting their BASIC listings and using SET to password-protect their accounts and word processing documents so that nobody but themselves can ever read them.

The second type spends their life sending mailshots to publishers with the manuscript of their latest book and generally exposing the contents of their files to all and sundry. Still, however, nobody but themselves ever reads them.

Anyway, for those of us who use the PCW to write creatively, what packages would I recommend asks Jean Armitage of Glasgow.

• If you shunt a lot of text around, **Protext** is a splendid investment (£49.90 including book from Arnor on 0733 68909). It's fast, has an instant word counter, you can instantly move blocks around and insert one file in another and you can even have two files open at once. In fact, I'd say it's an essential for anyone who writes.

• If you're a **LocoScript** fan, you're mad not to upgrade to **LocoScript 2** (if you have a PCW8256 or 8512). It's faster and gives you

the chance to use all Locomotive's thoughtful add-ons: **LocoFile** is a pop-up card index database to keep your character details or other background info on perhaps and refer to it in the middle of editing a document.

• You also have in **Loco 2** a range of foreign accents and symbols unrivalled by any word processor under £1,000 (Greek, Cyrillic, maths and scientific symbols up to PhD standard, even an Urdu/Arabic version). **LocoScript 2** is £25, **LocoFile** £30. Details from Locomotive on 0306 740606.

• A 24 pin printer gives you better than NLO quality at the same speed as your PCW: printer churns out draft - handy if you do a lot of printout! Scour the mail order ads, something like an **NECP2200** is about £300.

• **Ansible Index** compiles an index automatically for you in **LocoScript**. Anything you put in (+ReV) codes is indexed in order along with the page number in a specially created index file. Includes a word counter. This is an excellent program, very easy to use and fills two gaps in **LocoScript** very well. £30 from Ansible on 0672 62576.

It all counts

From Mike Filson: Notts replace each space with a **RETURN** using **[EXCH]** for a two week holiday, then come back. You now have one word to a line and can work out the number of lines from the page number and line count per page. Hmm, I think your best bet is to buy **LocoSpell** Mike which gives you a word count when you spell check a document and you only need go away for a weekend - unless you have the latest version of **LocoSpell** which can do a word count without spell checking, only giving you time for a cup of tea!

Basil Pigg

ATARI 8-BIT

ANTICS Roadshow

On with the show

Owners of the Atari eight-bit and indeed eight-bit computers from other manufacturers attending the annual PC Show at Earls Court last week would have been severely disappointed at the poor showing of software and hardware for these machines.

Floorspace was divided into three halls - one for business, one general and one for leisure. Atari STs and Commodore Amigas were everywhere running all types of software from graphics and DTP packages to business, music and games software, but nary an eight-bit could be found. So if you want a description of what was there I'm afraid you're going to have to wade through reams of PC, ST, Amiga and other stuff elsewhere in *Express* because for we devoted eight-bit owners it's back to poring over the small ads to get software.

Why SpartaDOS?

I've had several letters recently from owners of 1050 and other disk drives wondering what **SpartaDOS** is and whether they should abandon Atari's DOS and plump for the ICD offering. Others have heard that **SpartaDOS** features MS-DOS-like commands, and wonder whether they can run PC software on their Atari eight bits.

Unlike Atari's DOS which uses a menu to select operations, **SpartaDOS** is a 'command

line DOS. This means that instead of summing a menu from within BASIC and selecting a command such as Format, Directory etc., you boot up the computer with **SpartaDOS** and perform DOS operations (unlike BASIC and other programs from within its 'shell'). So, to format a disk or get a directory of the contents of a disk you simply type the command directly into the machine at the DOS prompt. If you want to use Atari BASIC then you issue a command to that effect and you're placed into BASIC.

SpartaDOS uses a set of commands which are almost identical to MS-DOS: you can't run PC software, but gaining familiarity with **SpartaDOS** means that if you have to use a PC or compatible at work or you decide to buy one in the future you will know DOS right away.

I heartily recommend **SpartaDOS**. The program comes on cartridge and features an excellent comprehensive manual explaining all commands. If you want a copy contact Frontier Software of Harrogate, North Yorkshire on 0423 567140 who will be happy to provide one.

Free software

Returning to the obtaining software theme, how would you like to have a huge pile of software, all written by programmers who know, understand and love our favourite machine and all for free? Sounds too good to be true, right? But Page 6, back-bedroom publishers of *New Atari User* magazine has tucked away an enormous quantity of very good public domain software, which for just the price of a disk and reproduction the company will send to you. There's games, business, graphics and utility software, and a whole host of programs which you'd never find available commercially. To find out more send for a catalogue to Page 6 Atari User, PO Box 54, Stafford ST16 1DR. Edmund Blake

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STREET TALK

BY MAFF EVANS

What a week! I can think of easier times to start writing for a magazine than PC Snow week. I can tell you, actually quite a few companies that showed on last year weren't present, such as Electronic Arts and -despite the success of Kick Off Anco- were noticeable by their absence. Their were still a few familiar names to see though.

One such company was Domark, who have come a very long way since the days of Friday the 13th. With their conversion team of Tengen, they gave us the excellent Blasteroids and with some interesting releases on the way - such as Toobin' and Cyberball - they stand to create a lot of commotion in the gaming public.

One product I will particularly looking out for is the conversion of Atari's Escape from the Planet of the Robot Monsters, a game which generated a cult following in the arcade fraternity with its cartoon graphics and children's matinee atmosphere. Should be a corker, Brian!

Also around were Mastertronic, eagerly showing off their new Sega releases and promoting their new 16 bit budget label '16 Blitz' - a range of games selling at £4.99 (value indeed).

One point of interest... isn't it strange how most games at the show seem to lean towards the 'arcade conversion' side of things? Didn't see many punters complaining though, after all, free play on Toobin'! Brilliant! Let's hope the conversion has the same playable quality that the coin-op has.

MINI REVIEWS...

SHINODI

Virgin-Mastertronic • £19.99 • Amiga version reviewed • Also on C64 and Atari ST

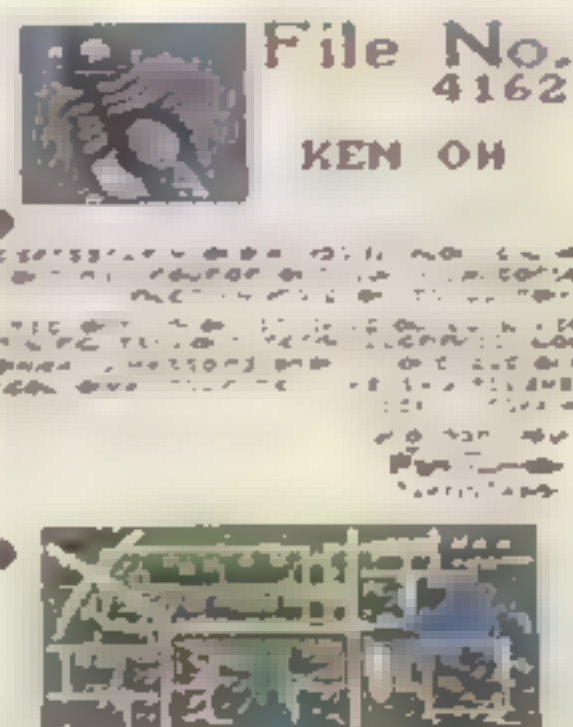


At last the conversion of the Sega arcade game reaches the home. You are placed in the role of a terribly famous Ninja warrior giving a speech at the school from which you graduated. As the sun beats down on the unsuspecting crowd, the evil Bwah Foo appears in a flash of dark Ninja Magic. He has come to kidnap the members of the Ninja school junior class for a huge ransom.

He manages to escape with the children and the deadline is now drawing close. You have managed to find the location of his hideout and must fight your way through his defences and save the hostages, armed with a plentiful supply of Shuriken and a little Ninja magic.

So ends the story in the poorly written instruction leaflet, which is just an indication of the poor quality of the game itself. The nicely drawn intro screen lulls the player into a false sense of security, a feeling soon dispelled by the poor in game graphics. I thought that it was supposed to be a sunny day? It looks remarkably dull to me, as the graphics seem to be based around a palette of greys and greens. The gameplay doesn't rescue any hope either consisting of repetitive run-jump-duck-fire action against hordes of identical enemies.

If you are a real fan of the game then just go to the arcades, but don't play this.



SHUFFLE PUCK CAFE

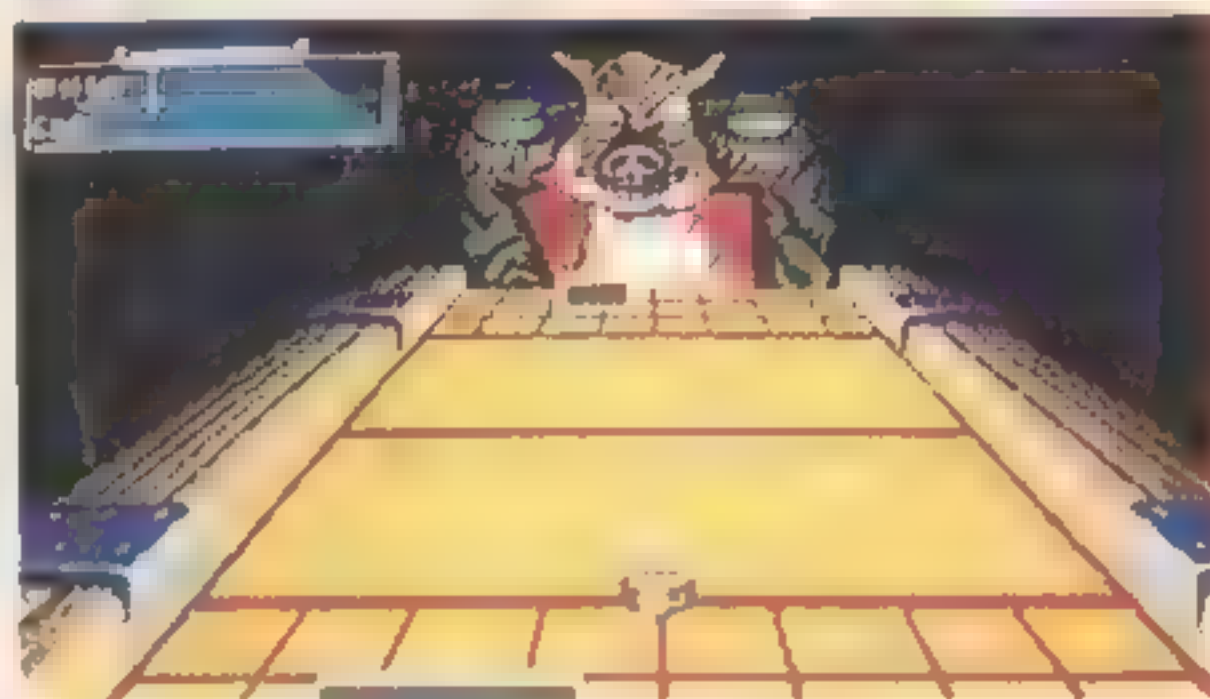
Domark • £19.99 • Amiga version reviewed • ST version available in October

Have ever been in one of those clubs where only the dregs of humanity seem to hang out? You know the kind of place I mean - the kind of place where they'd slit your throat for winning at cards. Unfortunately for you, you seem to have wandered into one of those places. None of the patrons want to know about "just using the phone", they want to play a game...

The game in question is Shufflepuck. A game around a board across which a small puck is belted back and forth with rectangular panels, the idea being that you get the puck past your opponent.

The various opponents range from a fairly tame droid to a huge warthog-like bruiser, all of which are playable adversaries.

Shufflepuck Cafe is rather an enjoyable game. The graphics are nice, the sound is adequate and the gameplay fun. If the game becomes boring you can change various settings to extend the lasting appeal. My only qualm is the lack of a two player mode, which would have made it great fun. Still, it's a good game and worthy of the attention of anyone who fancies a change.



HIT LIST

TOP 5 GAMES

Is your machine sitting whimpering in the corner, desperate for new software? Well fret no more! Express is here to steer you in the direction of the best games about.

1. KICK OFF
Anco • Amiga, ST, C64

Frantic footy fun without the need for Puma footwear.

2. XENON 2
Imageworks • Amiga, ST

Graphically superb shoot-'em-up with a belting Dave Whittaker soundtrack based on Bomb the Bass' Megablast.

3. RIK DANGEROUS
Microprose • Amiga, ST, CPC, C64, Spectrum

Adventuring action up the Amazon to get the old rude-word glands working.

4. NEW ZEALAND STORY
Ocean • Amiga, ST, CPC, C64, Spectrum

There's cute and then there's this addictive

platform arcade adventure 'romp'. A must for all fans of small animals (but nothing illegal, honest).

5. APB
Domark • Amiga, ST, CPC, C64, Spectrum

Screech around the streets as a rookie cop in this amusing little conversionette from the hit arcade game. Suitably different from most games of the genre.

FIRST PEEK

INFECTION



Not really a first peek as a "we didn't have time to get it in". Infection is one of the first releases from the 16-Blitz label (as mentioned in this week's Street Talk). Explaining the game is a little tricky so just try to bear with me...

Play takes place on a square board (like Othello) between players with different coloured markers (like Othello) and the idea is to change most of the markers to your colour (like Othello again). This is done by multiplying your pieces from square to square and jumping across the board (not like Othello for a change). The review will be in next issue which will no doubt urge you to buy it. And why not at the most generous price of £4.99 (Cor! Wow! Hey!).

TAME THE GAME



● BLOODWYCH (ATARI ST)

In the two player game, player 1 should stop still and call out by using the communicate command. Player 2 should follow the direction indicated at the top of his part of the screen. When you meet

up you will find that it is easier to win fights, since there are two sets of adventurers fighting just a couple of men or monsters.

Alternatively you can play a single player game by selecting 2 players quick-start and meet up as above. Then give all player 2's equipment to player 1 and kill off player 2. This means that you will now be heavily equipped and be blessed with combat experience points. OLIVER HARGREAVES, Preston, Lancashire

Useful tips indeed, Oliver. So for your troubles a copy of Outlaw's Cosmic Pirate ■ winging it's way to you.

● ARKANOID II (SPECTRUM)

Play the game to get onto the score table and enter your name as "MAAAAN". The game will now start at the level you died."

● FERNANDEZ MUST DIE (C64)

"Pause the game and type SPINYNORMAN for infinite lives.

● PETER BEARDSLEY'S INTERNATIONAL SOCCER (C64)

Continually tap the fire button when in possession ■ stop members of the opposite team from tackling you.

● STREET SPORTS BASKETBALL (C64)

The following team selections give the best results:

BOB or BRAD as pitcher
DANA or KIM on first base
DAVID or KITTY on second base
RALPH or BOJO for short stop
BUTCH or JUHE on third base
MELISSA or KEVIN in left field
TINA or MAGIC in centre field
RADAR or VIC ■ right field

Also, when playing, always try to run to the next base unless the baseman has the ball. If the baseman has just collect-



ed the ball then slide into the base as you get there to safely steal.

"GOODY", Rotherham, South Yorkshire

● THUNDERBIRDS (ST)

Here is the equipment each character needs for the missions:

DYNAMITE DUX



What must be one of the cutest games ever to have appeared in the arcades has made its way onto the home market and will have cartoon fans rushing to their machines.

GAMEPLAY • The plot of the game is revealed by a very nicely done intro sequence. Showing Bin and Pin - the Dynamite Dux - playing in the fields with their pretty friend Lucy (aaw!). Suddenly there is a big puff of smoke and the evil



demon Achacha appears. The three friends stand rigid with shock as Achacha throws a magic bubble which captures Lucy and takes her off to his lair.

Bin and Pin decide to go to the rescue, their fright having been replaced with anger at the nerve of the nasty so-and-so.

Remember though, that this is cartoonland we're talking about here, a place where normality hardly applies. Our feathered heroes must fight their way through gangs of nasty - and somewhat whacky - adversaries. These include bouncing moose-heads, spring

loaded boxing crocodiles, Sumo wrestling pigs, roller skating cats and rampaging packs ■ rats to name but a few.

Fortunately, as well as having a vicious power-punch, Bin and Pin can pick up and use various weapons along the way. Some weapons are more useful for some things and just happen to be in the right place at the right time - for example the water cannons are good for wiping out the fire monster. Also available for your devastating pleasure are missile launchers, rifles, bombs, flame-throwers and bombs.

Play takes you to a variety of car-



toonlike scenes including the town square and a Japanese street. All of which are packed with strange creatures.

● **MISSION 1**
Alan - Lamp and Oil Can
Brains - Torch and anything else

● **MISSION 2**
Gordon - Aqualung and American Express Card
Alan - Aqualung and Radiation Pills

● **MISSION 3**
Lady Penelope - Sleep Spray and anything else
Parker - Mouse and Stethoscope

● **MISSION 4**
Virgil - Shades and Gun
Scott - Shades and Superglue

Also, here are the passwords to access the further levels:
Level 2 - RECOVERY
Level 3 - ALOYSIUS
Level 4 - ANDERSON
Name and address not supplied

● **THREE STOOGES (AMIGA)**
When playing the slapping game, keep twisting Larry's ear, since this reduces the hand speed much more.
D J PLATER, Dorset

● **RUN THE GAUNTLET**
Use the keyboard when playing the Water and Offroad sections and the joystick for The Hill.
At the start of a race, always try to overtake the first opponent on the inside

OTHER VERSIONS

Amiga	£24.99dk	Out Now
ST	£19.99dk	Out Now
C64	£9.99cs, £14.99dk	Out Now
CPC	£9.99cs, £14.99dk	Out Now
Spec	£9.99cs	Out Now
PC	No version planned	

GRAPHICS AND SOUND • The feel of the arcade original has been captured perfectly with the cute 'n' cuddly sprites and colourful backdrops, but the sound could have done with a bit more spice. Not that it's awful, it just sounds a little bit twee, much to the annoyance of some people around here. Despite this little flaw, Dynamite Dux is an amusing and enjoyable "romp" through a cute and colourful cartoon world...and I love cartoons!

OTHER VERSIONS • The ST version isn't too far from the coin-op either. The only really noticeable differences being the scrolling and the sound. This is the only other version I've seen apart from the Amiga, but I can't really see any difficulty with converting to the other formats. The game is rather simple after all. Still they should all be out by the time you read this so try it for yourself.

VERDICT ★★★★★
Dynamite Dux was a cracking arcade game in my view and Activision have done a cracking job in converting it to the Amiga. The "cutesy" factor makes the game instantly appealing and you have to keep playing just to see what comes next. If you like games with nice bright colours and with a touch of humour then this is for you.

line of the first corner, then follow the leading craft.

On the Water, you should try to pass opponents on the major turns, whereas on the Offroad course you should limit your overtaking to the straights.

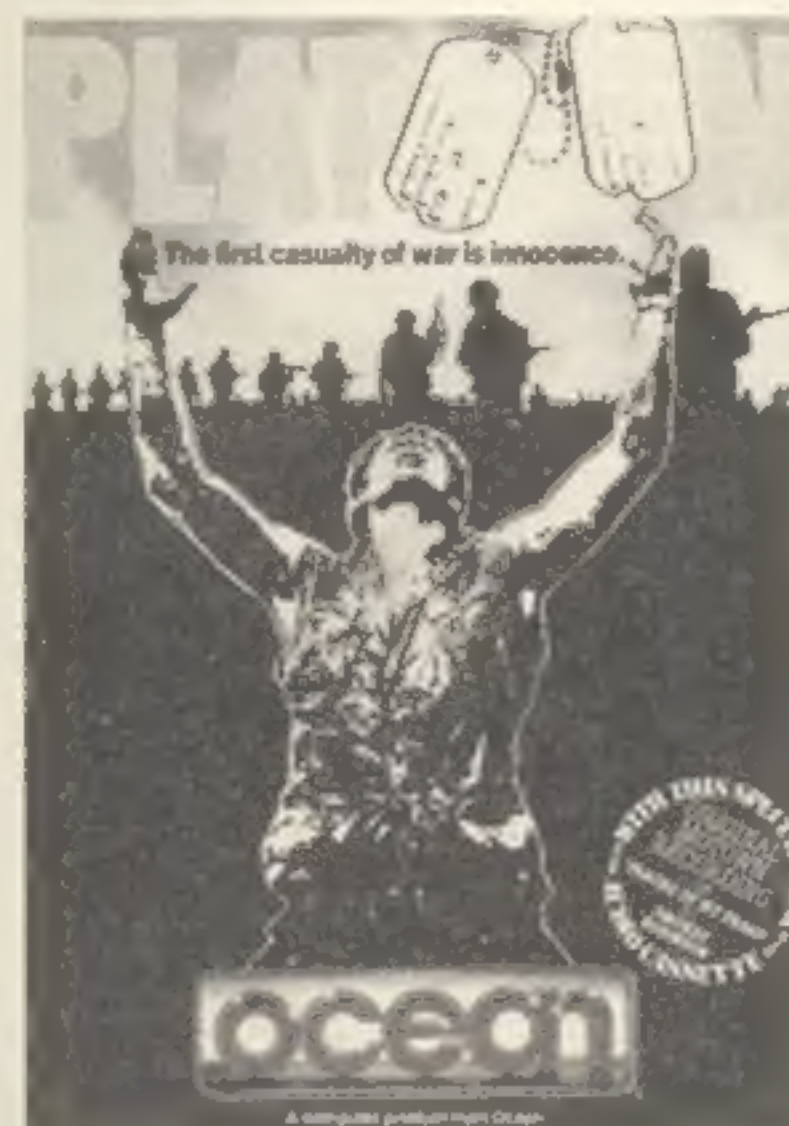
Finally, keep away from the centre of the roads and waterways, since that is where the explosions go off.

DAVID DEANS, St Albans, Hertfordshire

● PLATOON (ST)

Load the game, wait for the programming credits to appear and type in HAM-BURGER HILL. Now pressing F1 to F3 moves you from the jungle to the village.

PATRICK MCGONIGAL, Darlington



● FLYING SHARK (AMIGA)

When you are prompted to enter your initials on the high score table, enter the following - holding down the "5" on the keypad - for special effects.

RLH - Full Acid
JGL - Full Firepower

KDJ - Infinite lives

RAB - Invulnerability

FLYING SHARK (ST)

These are the corresponding codes for the ST version.

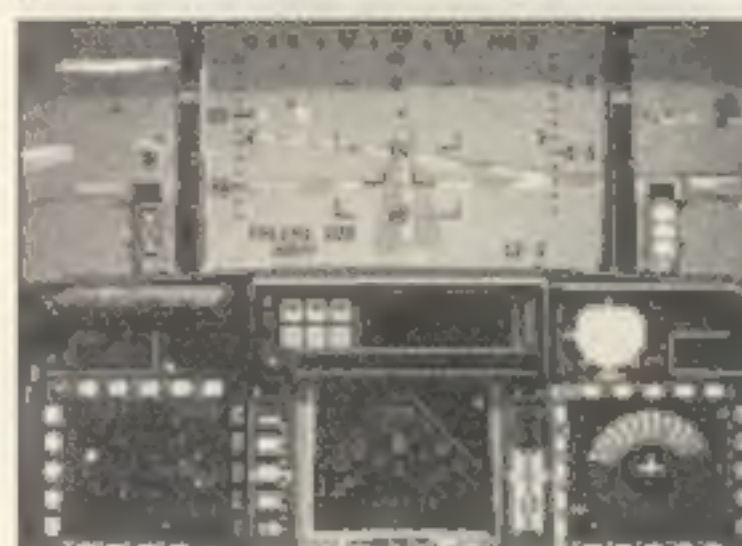
JH - Full Firepower

KDJ - Infinite lives

HSC - Invulnerability

DAVID SARGEANT, London

F-16 COMBAT PILOT



● F16 COMBAT PILOT (AMIGA)

If you're fed up with landing then try the following: Jetison all fuel and weapons and climb to 65000ft. Stay there until the last of the fuel runs out. Dive towards the ground and at 10 or 11 thousand feet pull up hard. You will then be able to rise about 4000 ft and then start falling towards the ground. Just as you hit the ground the mission will end safely. But kids, don't try this for yourselves with a real F-16.

DO YOU OWN THESE GAMES?

- DYNAMITE DUX
- BATMAN
- SHADOW OF THE BEAST
- XENON II
- RIK DANGEROUS

These are this month's five infuriating games. We need help! Can you beat

the...er...living daylights out of any of them? Maybe a cheat mode or something. Well don't leave them festering in a corner somewhere, send them in to me at;

Tame the Game
4 Queen Street
Bath
BA1 1EJ

Best Game Taming technique of the week wins a prize.

We still haven't had any scores sent in, doesn't anybody want to be (nearly) famous? If you do send 'em in and let's see what you've got to flash about (if you know worra mean!)

Play back

Your views on the latest software -
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"I just thought that it was rather funny the Blitz copier being beaten by Microprose' new game Pirates on the ST."

• Me too. Absolutely hilarious.

"Quick sales fail due to in-breeding between Amiga and ST mouses (?). They got a bit too close together and...well you know what an Amiga mouse and an ST mouse do when they get together... WHAM-BAM-BOOGIE!"

• You obviously had to be there.

"Where's my prize for my listing printed in Tame the Game? And I had some tips printed in issue 45 as well. It says "Best Game Tamer pub-

lished in each magazine wins a prize". Surely that listing's worth a prize. Come on guys!"
JULIAN SMITH, Sheffield

ONE-LINERS

• Something for the budget buffs to kick off with, as Codemasters release Operation Gunship this week on the Spectrum and Amstrad at their now standard price of £2.99. Codemasters say that they are "pleased" with the game and have high hopes for its success.

• Bound to be a popular release is Anco's Player Manager, due out in November at a price of £19.95. Despite the impending (well, December - any rate) release of the Kick Off expansion disk, Anco think that Player Manager will be the game that everyone will be going for.

• Domark are about to release their latest batch of games, including Toobin' (due about November 8th across all formats except PC) the much anticipated Hard Drivin' (all formats, due out around 22nd November) and the successful "cult" game Escape from the Planet of the Robot Monsters. Also available soon are Pictionary and Dragon Spirit, both due out in October across all formats at the usual prices.

• By the time you read this, two titles formerly on Hewson's Rack-It label have made their way onto 16 bit. Battle Valley and Steel should now be available on ST and Amiga at the not-so-budget price of \$19.99. Also to follow are other conversions such as Slayer and 5th Gear, out in October and November respectively.

• Krisalis are due to release the 16 bit versions of their Manchester United licence game over the next couple of months. The ST version will cost £19.95, whereas the Amiga owners will have to cough up a little more at £24.95. Other versions are to follow including a version for the new Knix Multisystem.

• For all you PC-owning war fans, Microprose is planning to release two new products this month. F15 Strike Eagle II follows on the success of the original with a "super enhanced version" (so they say). The game features four combat zones: the Persian Gulf, Libya, Vietnam and the Middle East. The other game is a ground warfare simulation - M1 Tank Platoon - which places you in control of the M1 Abrams tank. Also there is an option to call in such things as air attacks. F15 Strike Eagle II will retail at £34.95, whilst M1 Tank Platoon costs £39.99.

• Pride comes before a fall they say, so I'd avoid cliffs if I were you.

"Batman on the Spectrum must be the best game ever - and thank you for printing my advert in the New Computer Express adverts."

• You're very welcome, I'm sure.

Not too many calls on relevant subjects this issue. Maybe someone with something constructive to say could try the line on 0225 444439.

EXPRESS LISTINGS

The listings page with a difference: they're worth reading

Ten famous people and their computers

10 Ben Elton
Apple Macintosh
20 Rolf Harris
Amiga
30 Jeffrey Archer
PCW9512
40 Donny Osmond
Atari ST
50 Stock, Aitken & Waterman
386 PCs
60 Tony Benn
BBC
70 Kenny Dalglish
Atari ST
80 Cliff Richard
Atari games console
90 Princess Di
Atari Folio
100 Douglas Adams
Macintoshes ad nauseam

Ten TV characters and their computers

10 Jane in Neighbours
Apple II GS
20 Colin in EastEnders
CPC
30 Henry Wilks in Emmerdale
Farm
PCW
40 JR Ewing in Dallas
386 PC

50 Bobby Ewing in Dallas
Compaq
60 Michelle in EastEnders
Used to use a PC for medical records
70 Phil Archer in The Archers
PCW
80 Rodney Trotter in Only Fools and Horses
CPC for his Computer Studies course
90 Tom in Howard's Way
PC running CAD
100 Crockett and Tubbs in Miami Vice
Had an Amiga 1000

Ten Computer Things Named After Animals

10 Lynx
Supposedly keen-eyed 'little cat' Felis lynx; also Atari's new handheld games machine which requires eyes like a lynx to see the screen
20 Mouse
Usual name for the house mouse, Mus musculus; also computer hardware, so named because it supposedly looked like a mouse
30 Husky
Siberian working breed of dog Canis familiaris; also equally hardy

early laptop much used by the military that could reportedly withstand grenade blasts

40 Wren
Any of 59 species of Troglodytidae and also old PC makers

50 Dragon
Mythical creature of legend and Chinese symbol of maleness and activity; also early eighties eight-bit machine that enjoyed brief spell of success, with similar male bias

60 Linnet
Seed eating finch Carduelis cannabina and also modem by Pace

70 Turtle
Toothless reptiles of order Chelonia that have remained unchanged since the Triassic period 220 million years ago; also the 'cursor' in Logo, which is equally prehistoric

80 Cheetah
Fastest land animal on earth Acinonyx jubatus, and manufacturers of peripherals for the rather slower Spectrum

90 Exocet
French name for flying fish, family Exocoetidae, and games software house who are not quite as high flying

100 Sandpiper
Mud flat dwelling birds of family

Scolopacidae, and business software house which produce accounts packages

Ten Things That Never Happen In Computer Games

10 Saving a penalty taken by the computer in Kick Off
20 Getting to play the maximum scoring word in Scrabble, OXYPHENBUTAZONE
30 Visiting all 1034 worlds in Federation of Free Traders
40 Going through all nine worlds in Mario Brothers without using the warp zones
50 Beating any chess program on the top level
60 Going to sleep after playing Tetris without seeing blocks falling in front of you when you close your eyes
70 Getting past more than two screens in Rik Dangerous with no bullets
80 Getting any sense out of a text adventure
90 Anyone admitting that they died because they made a mistake instead of blaming the computer
100 Mrs Pacman doing anything useful in Pacland apart from standing around with the sprog.

NEXT WEEK ■ NEXT WEEK ■ NEXT WEEK

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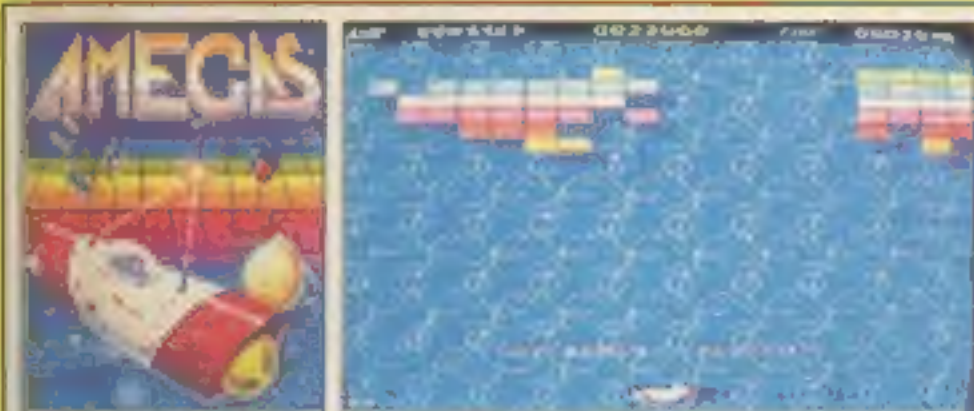
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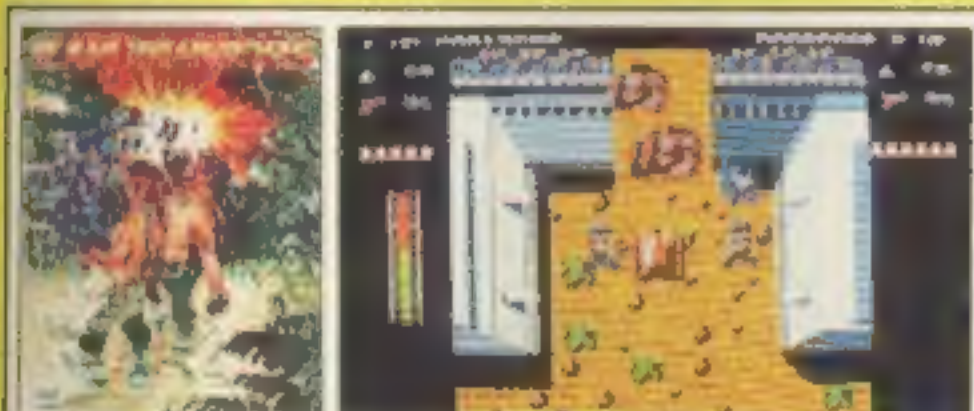
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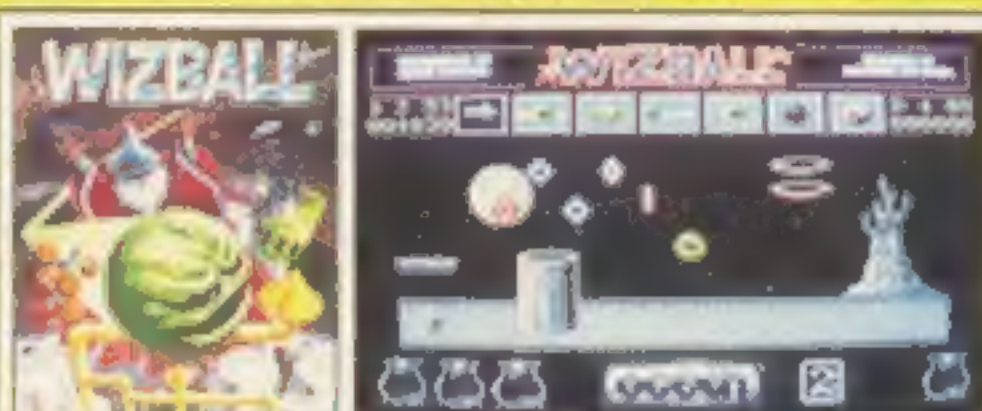
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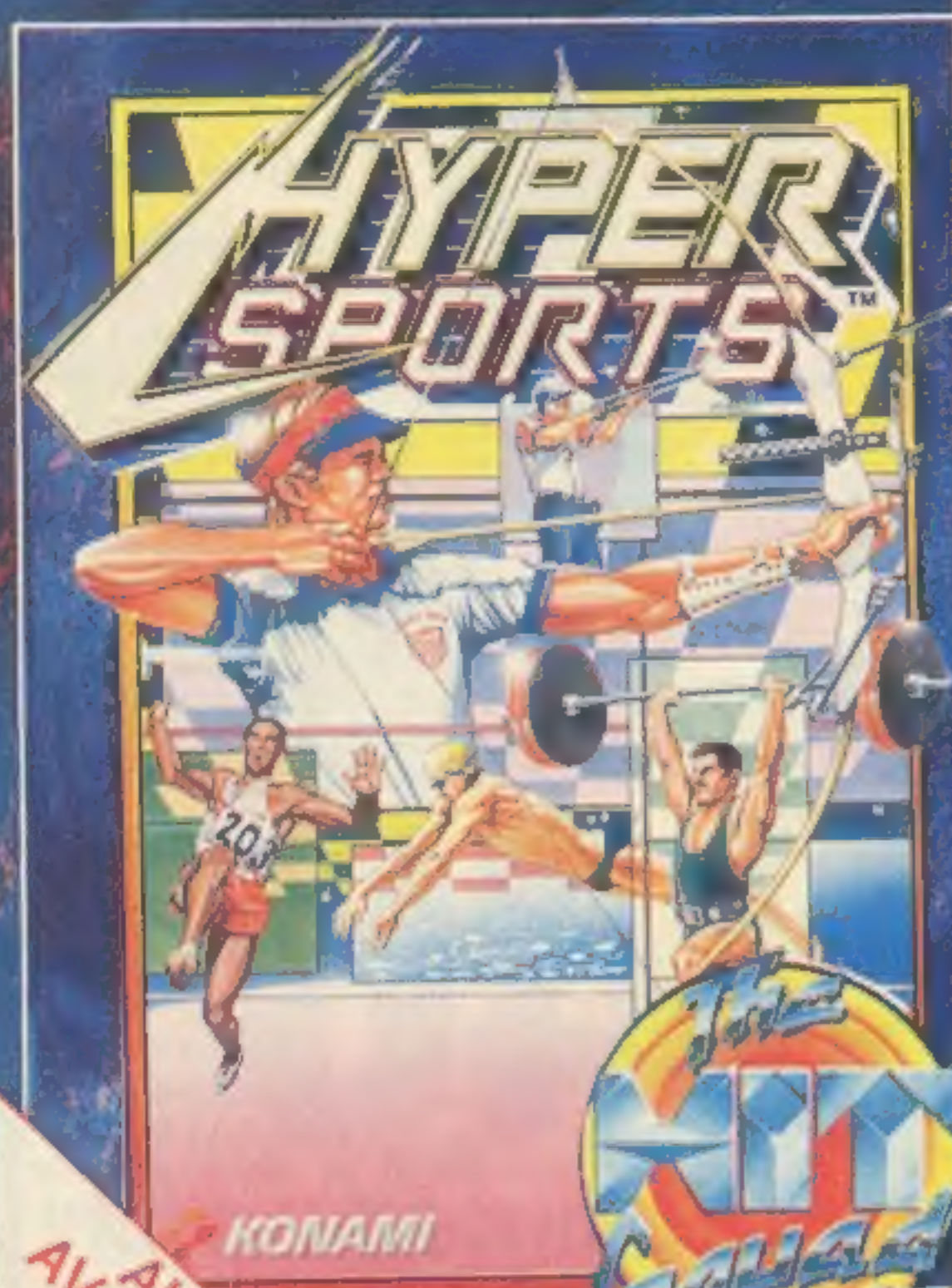
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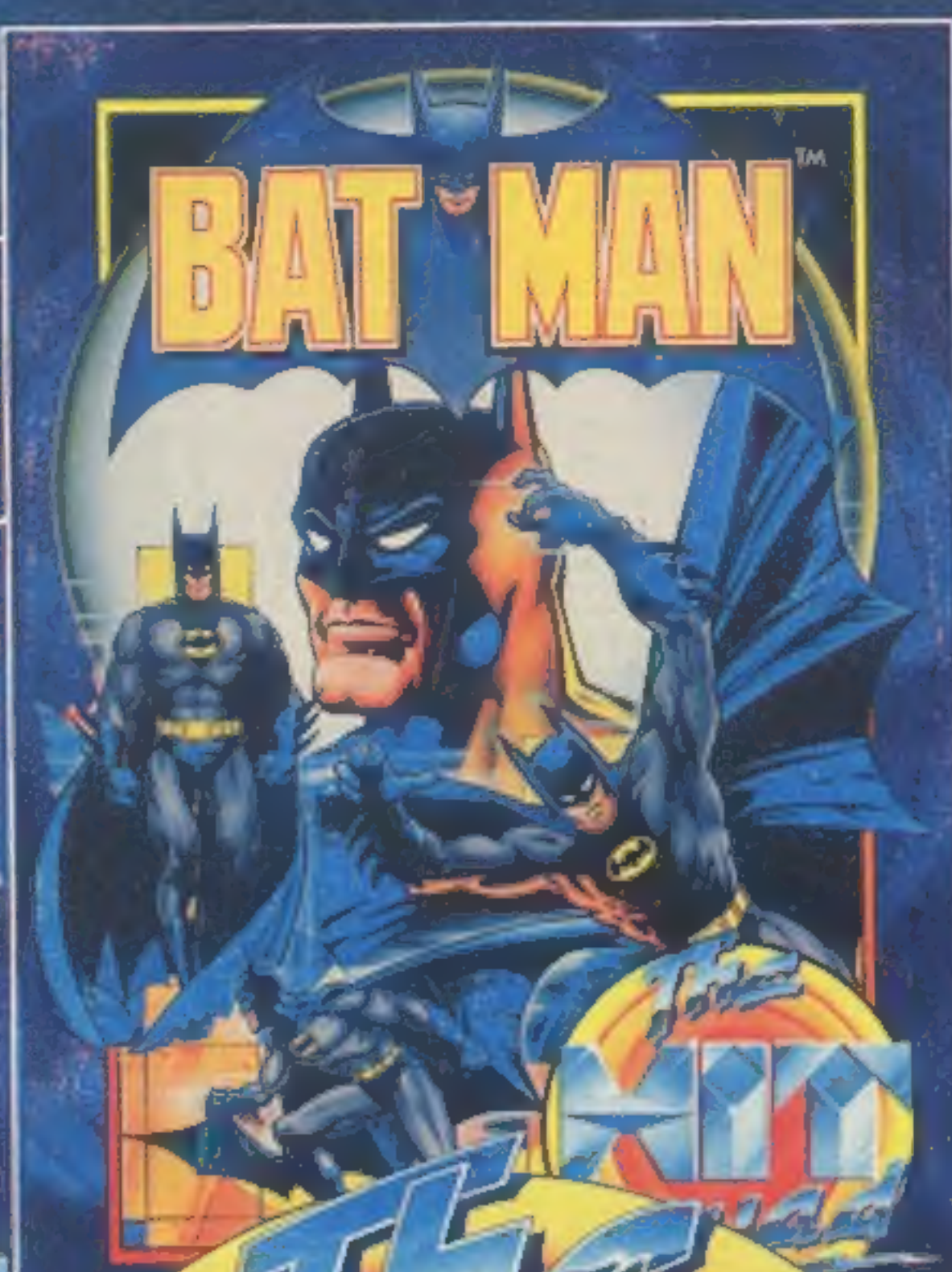
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